

61e15

T H E
P R A C T I C A L B U I L D E R,
O R

W O R K M A N ' S G E N E R A L A S S I S T A N T :

Shewing the most approved and easy METHODS for DRAWING and
WORKING the whole or separate PART of any BUILDING, as

The Use of the TRAMEL for GROINS, ANGLE-BRACKETS, NICHES, &c.

Semi-circular ARCHES on Flewing JAMBS, the preparing and making their SOFFITS.

R U L E S O F C A R P E N T R Y ;

To find the LENGTH and BACKING of HIPS, strait or curved; TRUSSES for ROOFS,
DOMES, &c.—Trussing of GIRDERS, SECTIONS of FLOORS, &c.

The Proportion of the Five Orders, in their general and particular Parts, Gluing of Columns,
STAIR-CASES with their *ramp* and *twist* RAILS, fixing the CARRIAGES, NEWELS, &c.

Frontispieces, Chimney-Pieces, Ceilings, Cornices, Architraves, &c. in the newest Taste.

With Plans and Elevations of Gentlemens and Farm-Houses, Yards, Barns, &c.

By WILLIAM PAIN, ARCHITECT and JOINER.

Engraved on Eighty-three P L A T E S.

LONDON: PRINTED for I. TAYLOR, at the BIBLE and CROWN, in
HOLBORN, near CHANCERY-LANE,
MDCCLXXIV.

Price 12 s. Bound.



P R E F A C E.

CONsidering the Number of Books on the Theory and Practice of Architecture already published, any further Effort to illustrate and familiarize this MOST NOBLE ART, may seem superfluous and unnecessary; in me especially, who, by two former Publications, endeavoured to advance the young Practitioner in the Knowledge of his Profession.

But as Art is improving, greater Experience enables to discern the truly useful, and thereby to confirm or reject former Methods.

The very great Revolution (as I may say) which of late has so generally prevailed in the Stile of Architecture, especially in the decorative and ornamental Department, will evince the Necessity and eminent Utility of this Publication. That Taste (so conspicuous in our modern Buildings) which is vainly sought in any other practical Treatise, the Workman will here find illustrated in a great Variety of useful and elegant Examples.

The Deficiencies and confined Plans of those Books now used by Workmen, is another Inducement to collect together in one View, the most easy and certain Rules to carry on the Building Art. These are the Result of Experience, and by the Author long used in conducting Business, who now offers the Public a general practical Treatise, wherein his great Care has been plainly and faithfully to answer the Purpose of the manual Artificer: It is not meant to instruct the professed Artist, but to furnish the Ignorant, the Uninstructed, with such a comprehensive System of Practice, as may lay a Foundation for their Improvement, and thereby enable them to execute with Ease and Precision, the various Branches of the Profession.

T H E

TABLE OF CONTENTS.

<i>Plate</i>	
1 —	N ICHES, Elipfis, raising Perpendiculars, use of the Tramel, and how to make ditto, &c.
2 —	Plan and Section of Groins, veneering Niches, &c.
3 —	Circular Arches in a circular Wall, circle Arches, Soffits, &c.
4 —	Groins, Angle Brackets, Circular and flewing Soffits
5 to 9	Sections of Floors, Trussing Roofs in Ledgment, Girders, length and backing of Hips, strait and curved Trusses for Roofs, Domes, &c.
10 —	Mouldings, Ballasters, &c.
11 —	Inter Columnations
12 —	Proportions of the Orders, Pedestals, &c.
13 —	Tuscan Frontispiece, Base, Capital and Entablature
14 —	Doric ditto
15 —	Ditto Entablature at large
16 —	Ionic Frontispiece, Base, Capital and Entablature
17 —	Ditto Entablature at large
18 —	Modern Ionic Capitals and Volute at large
19 —	Gluing up ditto
20 —	Antique Ionic Capital

<i>Plate</i>	
21 —	Corinthian Pedestal and Base at large
22 —	Corinthian Capital and composed ditto
23 —	Ditto Entablature
24 —	Antique Composite Capital.
25 —	Composite Cap & Entablature
26 —	Planceers of Corners
27 —	Gluing of Columns
28 —	Impost
29 to 34	Frontispieces with their Entablatures, Moulding, &c.
35 & 36	Open Pediments and raking Cornices
37 to 48	Chimney-Pieces with their Moulding and Ornaments
49 —	Mouldings for Pictures and Glass frames
50 —	Ornaments for Friezes, Pillasters, &c.
51 —	Cornices for Doors, Chimnies, &c.
52 to 58	Bases, Sub-bases, Architraves &c.
59 to 61	Cornices for Door-Caps, Chimney-Caps, Rooms, &c.
62 to 65	Ceilings, Frets, Guilloches, &c.
66 to 73	Stair-Cases
74 to 83	Gentlemens Houses, Greenhouses, Hot-houses, Stabling, Farm-houses, &c.

A TABLE for the Cutting of Timber for Building.

Bearing Post.

Height.	
If 8 Feet	9 Inch. square
— 10 —	10 by 9
— 12 —	11 — 12
— 16 —	14 — 15
— 20 —	16 — 18

Beams or Ties.

Length	Inches
12 Feet	7 by 8
16 —	8 — 9
20 —	9 — 10
30 —	10 — 11
40 —	12 — 11
50 —	13 — 12

Girder's Bearing.

If 10 Feet	10 by 9 In.
— 12 —	11 — 10
— 14 —	12 — 11
— 16 —	12 — 13
— 18 —	13 — 14
— 20 —	15 — 14
— 24 —	15 — 16
— 30 —	16 — 18

Small Rafters.

Bearing	Inches
8 Feet	5 by 3
10 —	7 — 3
12 —	8 — 4

Binding Joists.

Bearing	Inches
6 Feet	6 by 4
8 —	7 — 4
9 —	8 — 4
12 —	10 — 5

Principal Rafters.

Length	Bot ^m . Top. Thick.
From 12 to 16 Feet	8 — 6 — 5
From 16 to 20 —	9 — 7 — 6
From 23 to 24 —	10 — 8 — 7
From 24 to 30 —	12 — 10 — 9

Bridging Joists.

Whose Bearing should not exceed 5 Feet,
and Scantling not less than 6 by 4.

Purlins from 8 by 5 to 9 by 7 or 10 by 8.

Raifing Plates from 7 by 5 to 8 by 6, or
10 by 8.

Common Joist.

Bearing	Inches
6 Feet	6 by 3
9 —	9 — 3
12 —	12 — 4

Ground-fills the same as Raifing Plates.

To face P L A T E I.

Figure *A* and *B* are ribb'd NICHES for Plaistering.

TH E Plan *a* is a Semi-Elipfis on the transverse Diameter, which is drawn with a Trammel as represented in the Plan, which is to be made with a Grove at Right Angles as in the Figure; two Pieces to be morticed to slip on the Rod, and one fixed at the End for a Pencil, &c. fix one of the Pieces equal to half the Conjugate Diameter, and the other to half the Transverse Diameter, and moving the Rod with the Pins in the Groves, the Pencil will describe the Semi-Elipfis.

To draw the Elipfis *c* to any given Length and Breadth, take half the Conjugate Diameter *a b* and set it on the Transverse Diameter *d e* divide *c d* into three equal Parts, and make *c e* equal to one of those Parts, and with the Radius *e f* bisect *g g*. So the Points *e f* and *g g* are the Centres for drawing the Elipfis to any Length and Breadth.

To draw the Elipfis *d* with a Line, take half the Transverse Diameter *b a* and set it from *c* on the Conjugate Diameter to *d* on the Transverse Diameter, and to *e* on ditto, then *e d* are the Points to be fixed for the Line to go round, which will describe the Elipfis with the Point *f*.

To glue the Head of a Nich as Figure *e*, cut the Arch Part of the Board or Stave to the Thickness of a Veneer, and bend it on a Templet, and back it to the Curve, it may be jointed the same as a Column, &c.

To describe a Polygon to a given Side from five to eight Sides, make a Radius of the given Side for the Pentagon, divide the Arch into five Parts, turn one down on the Line which is the Centre, to describe a Circle which will contain the Side five Times.

For a Hexagon, the Radius of the Side is the Centre.

The Heptagon into seven Parts and turn one up.

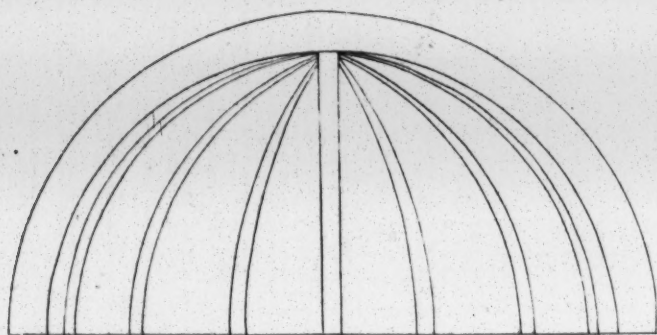
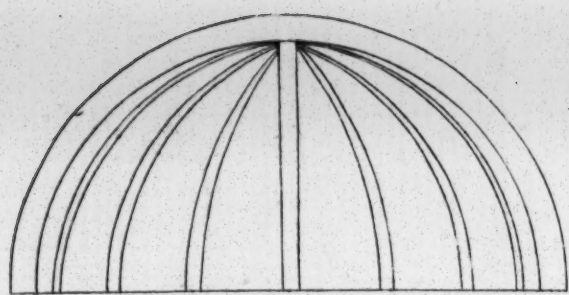
The Octagon into four and turn one up.

To raise a Perpendicular at the End or Middle of a Line. Describe the Arch *c d*, and with the Radius *a c* make *e f*, which bisect at *b*, gives the Perpendicular to *a*.

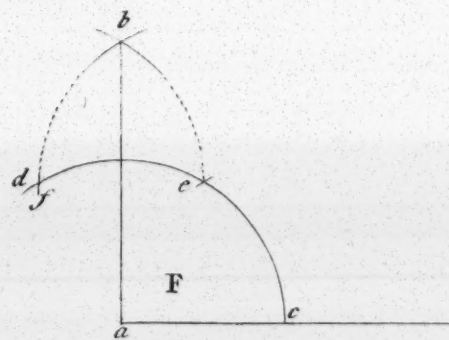
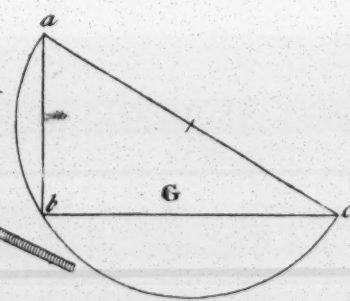
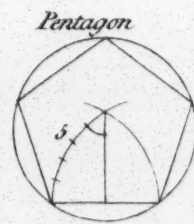
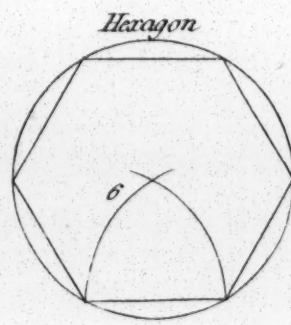
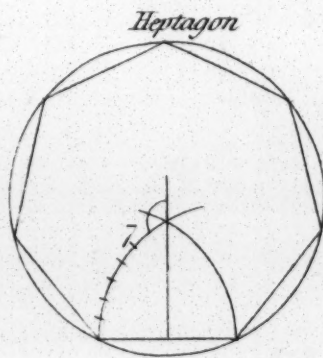
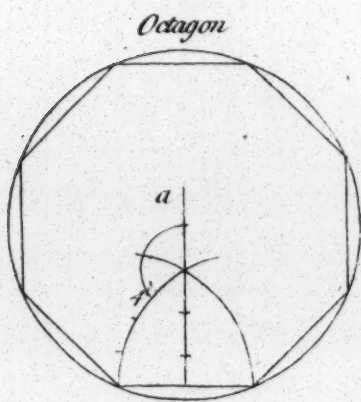
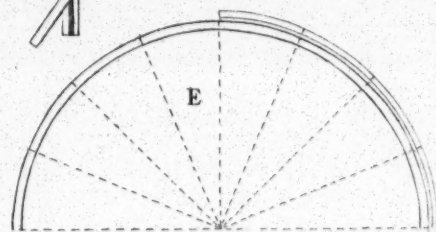
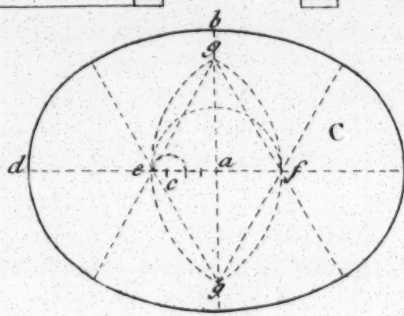
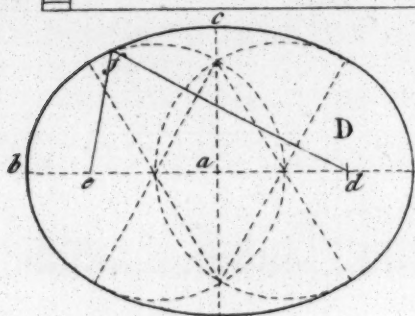
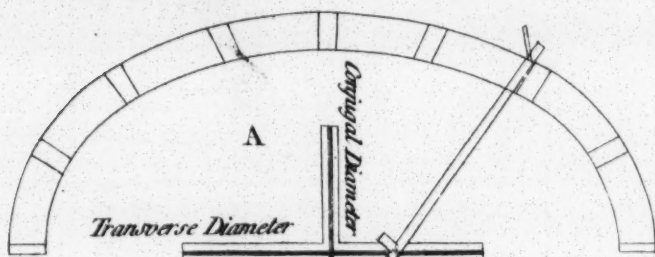
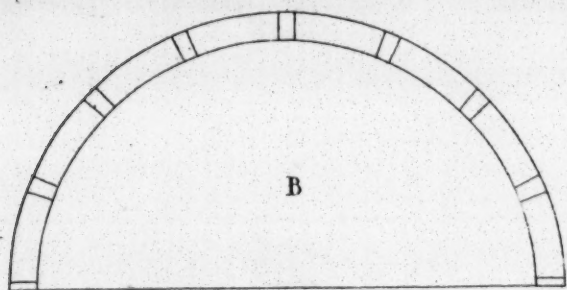
To let fall a Perpendicular from a given Point to a Base Line. Figure *G*; let *a* be the Point given to fall to the Base Line *b c*, draw a right Line from *a* at pleasure to meet the Base Line as at *c*, more or less; divide the Line *c a* into two Parts, and draw the Semi-Circle *a b c*, and where the Circle cuts the Base Line at *b*, which is at Right Angles with *a*, which was to be done.

Niches, Polygons, Trameles &c.

Plate I.



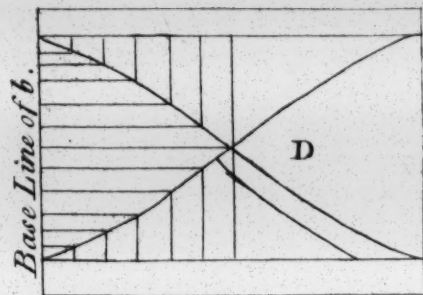
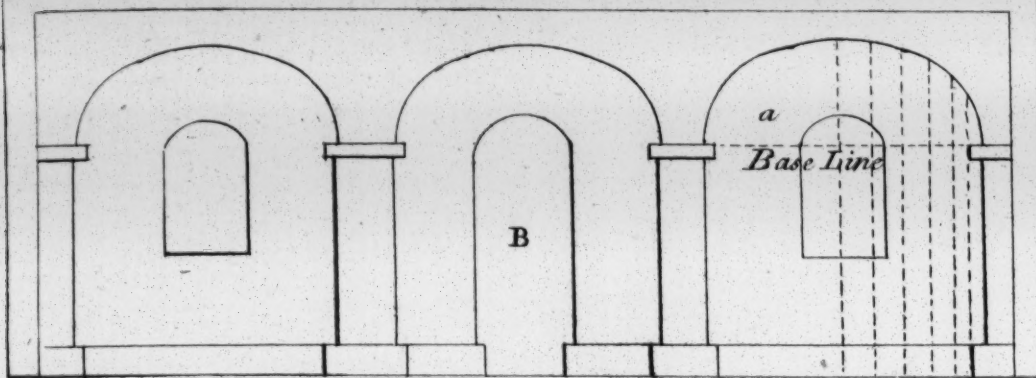
The Tramel Rod





Plan & Section of Groins Finccring Niches &c.

Plate II.



The Arch line of a, Stretched out at length.

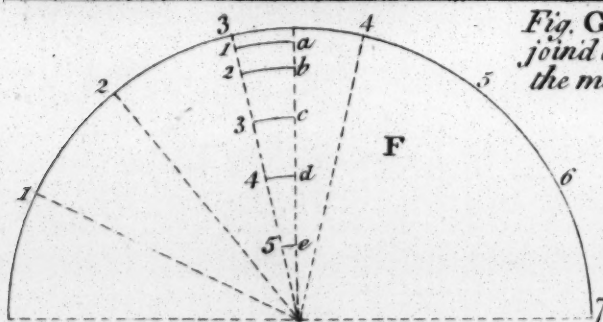
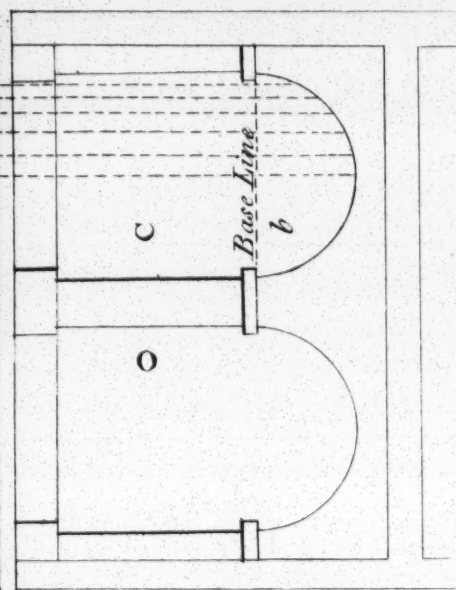
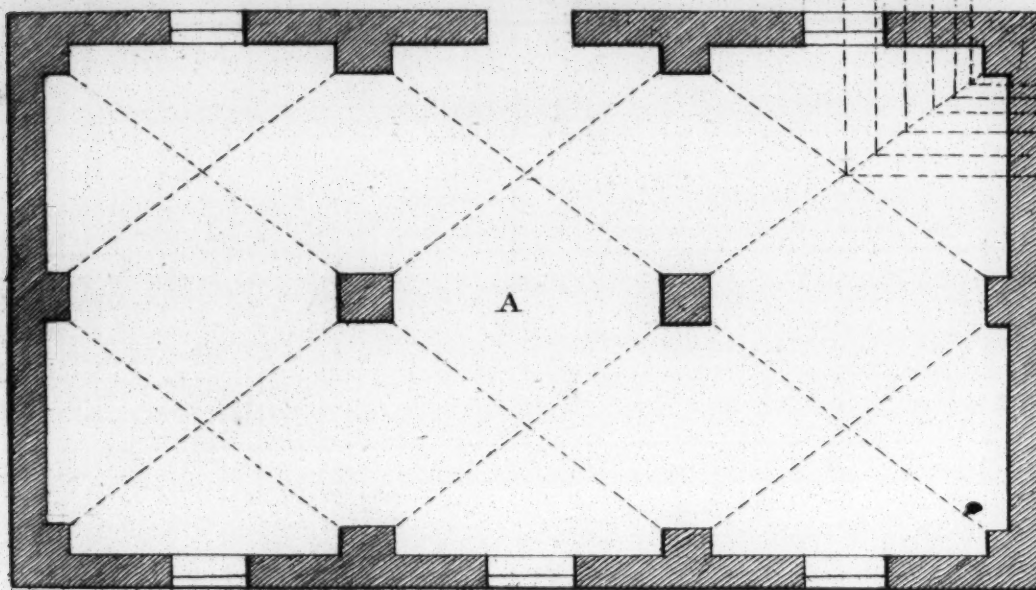
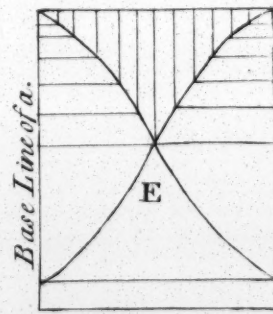
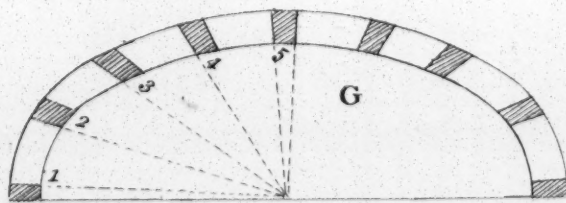


Fig. G. is a Ribbed Niche for plaistering with the Ribs all joind to y place where to stand the Edges are Bevel so the mould must be shifted.



The arch line of b. Stretched out at length.

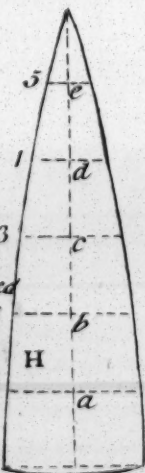
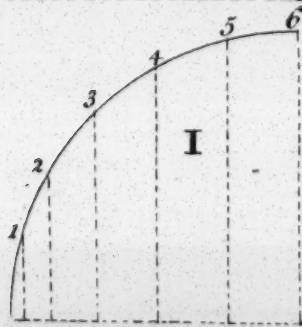


Fig. F. is a plan of Niche to be fineered H. is the fineer stretched out at length from y Arch I. & F. is y plan which y edges are traced from which is plain to Inspect but the more parts it is divided into the truer the Round. the plan is in 7 parts but in practice it may be into 15 parts or more at pleasure.

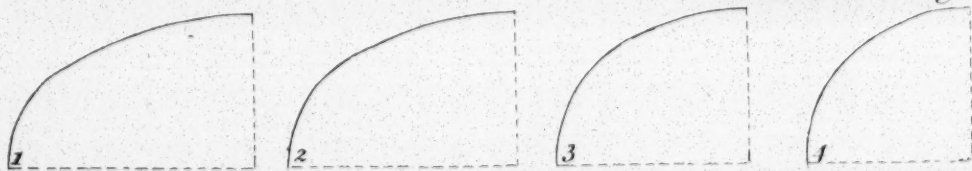


Fig. A. is a Plan of a Cellar Ground in B & C are the Sections which shew how the hip is traced to make the Angle streight over y plan. D and E. are the covering or face of the Groins stretched out from which a mould may be made to make the hip or Angle streight if the Ribs C, O. are set first & boarded in the mould must be taken from E. but if the Arches in Section B. be set first the mould must be taken from D.

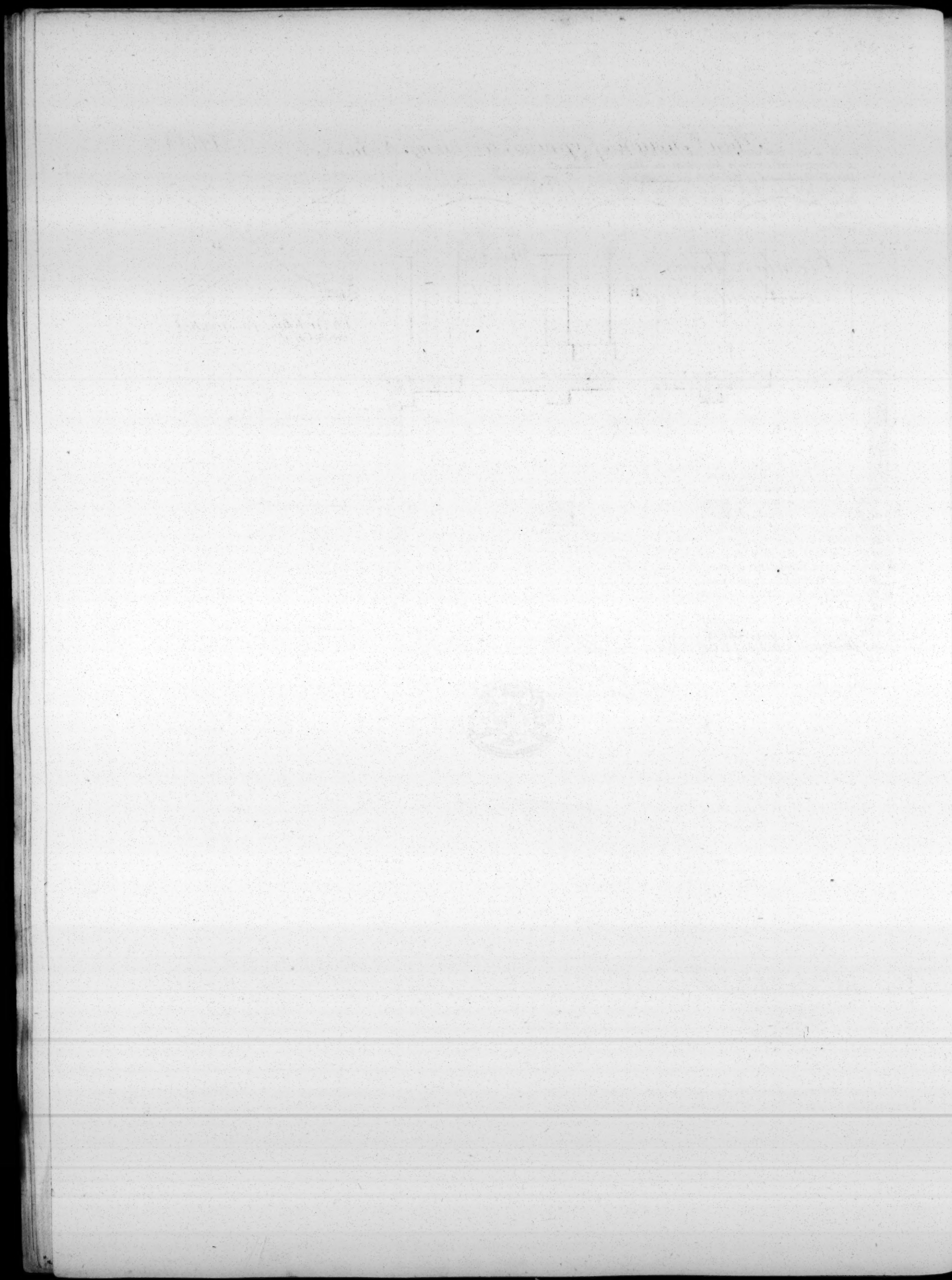


Fig. B. is an Arch standing on Flying Jamb's in a Straight Wall and supposed to be a fair Arch in Stone or Brick. Divide the Round of the Arch in as many Parts as are Courses to Compleat the Arch and drop them to the Wall Line, then Draw them cross the Wall, Parallel with the Jamb's, and that shews how much is to be Cut of the Face of each Course.

*Circular Arches &c.
in a Circular Wall.*

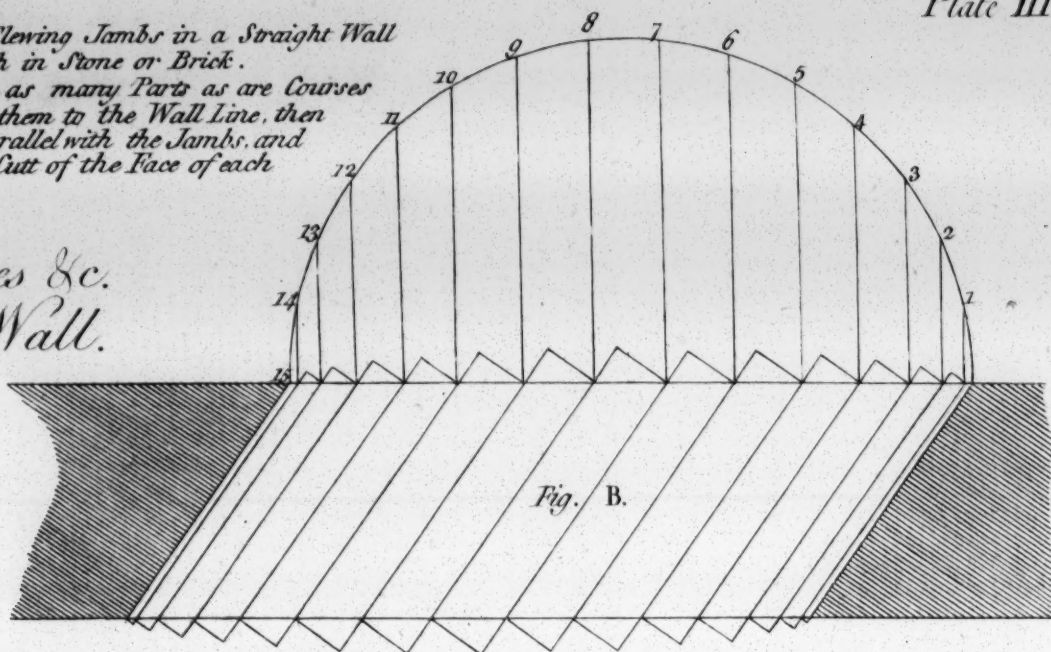
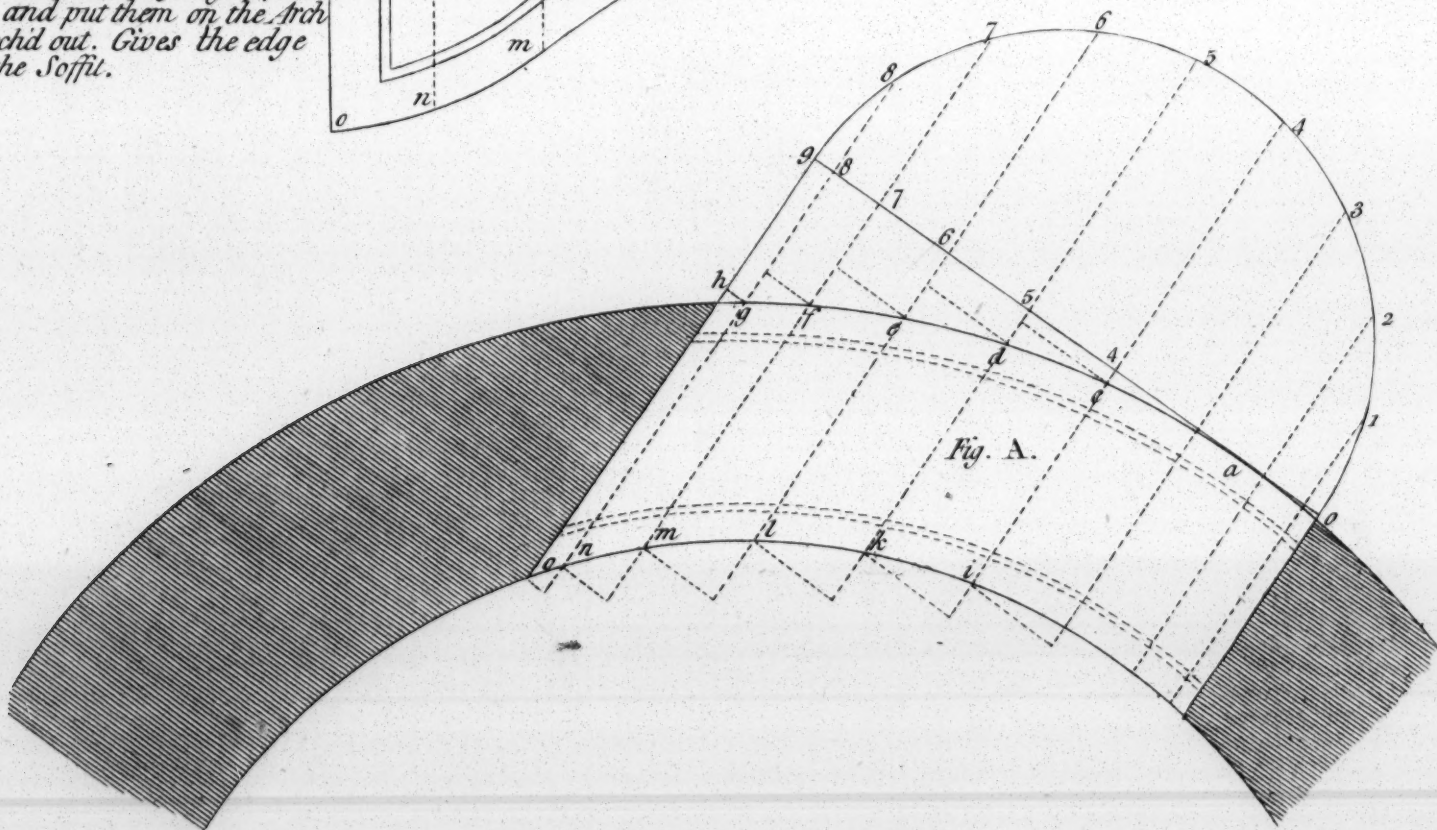
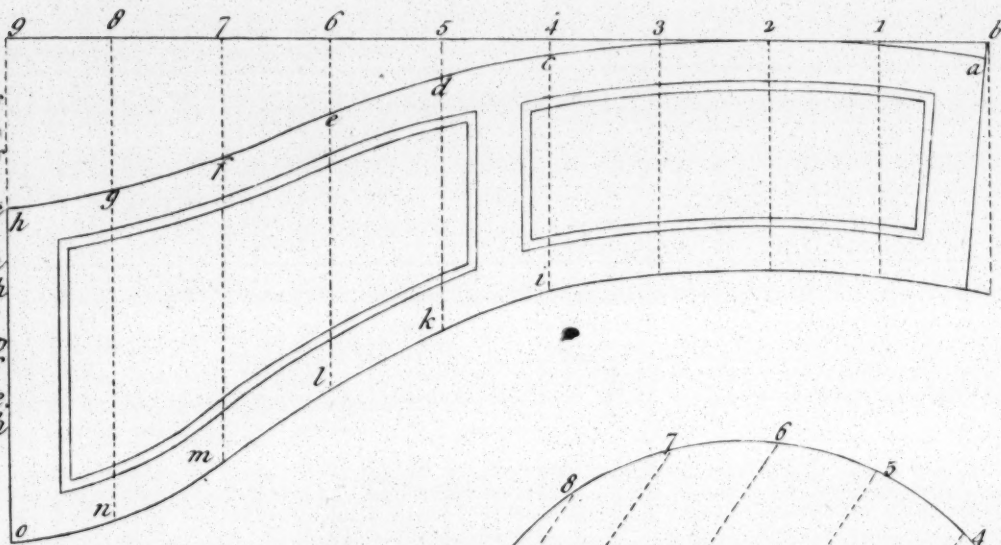
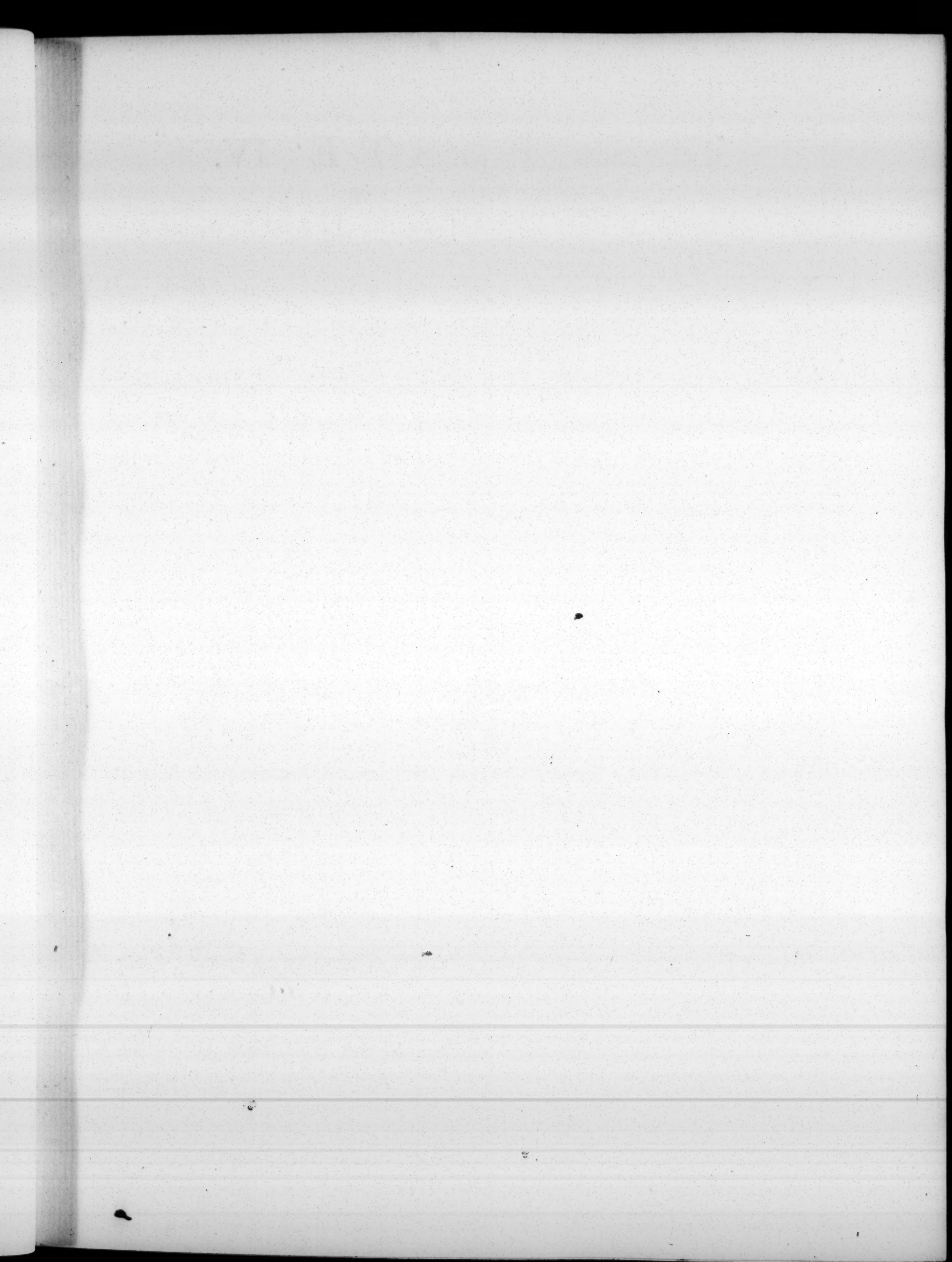


Fig. A. is a Circular Wall which has a Door or Window that stands Flying. Because the Jamb's do not stand at Right Angles with the Diameter of the Circle, as in Plate IV find the Curve Line of the Soffit, in this Case draw the Cord Line or Base Line of the Arch, o, g at Right Angles with the Jamb's o, h to touch the Arch of the Wall at a, and Divide the Arch into equal Parts and drop them to the Wall then take of the Distances, h, g, 8, g, 7, f, 6, e, &c. and put them on the Arch stretch'd out. Gives the edge of the Soffit.





To face P L A T E IV.

Figure *A* is a P L A N to be G R O I N ' D.

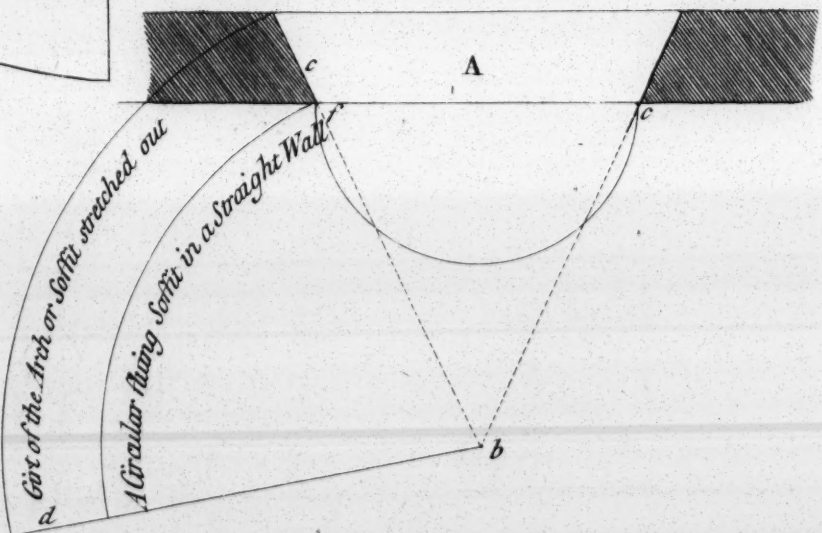
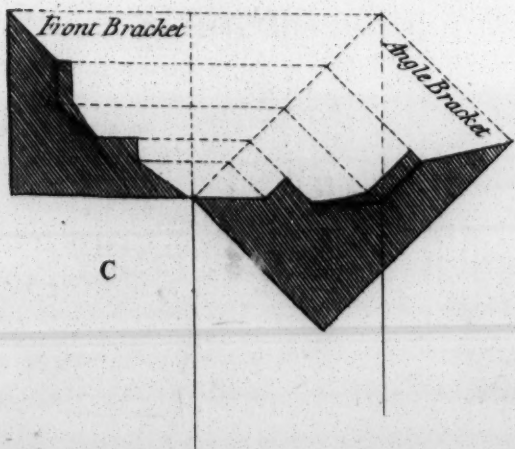
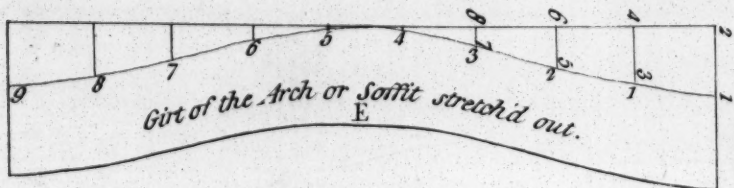
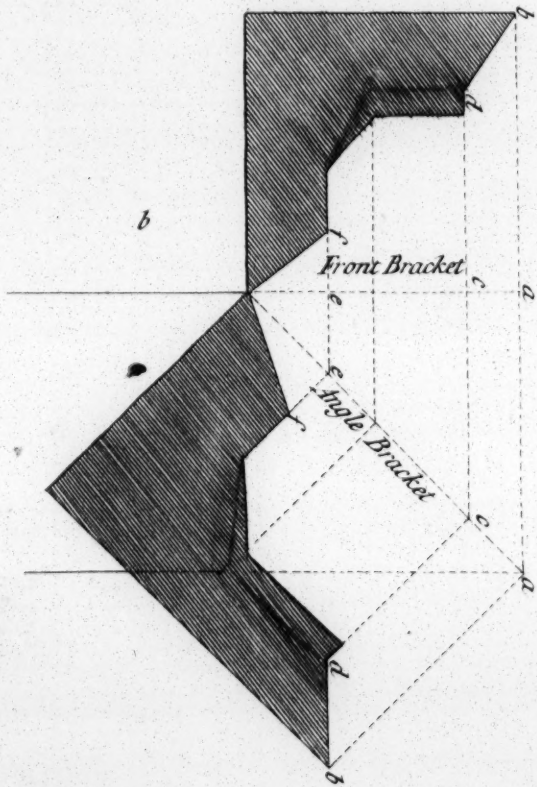
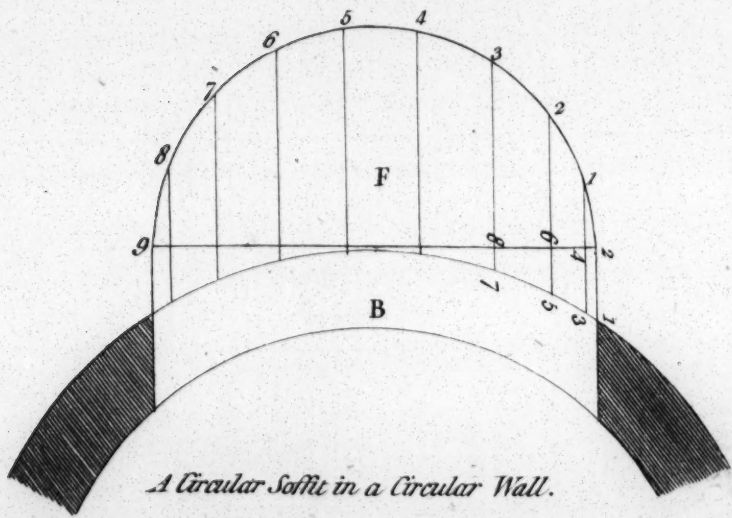
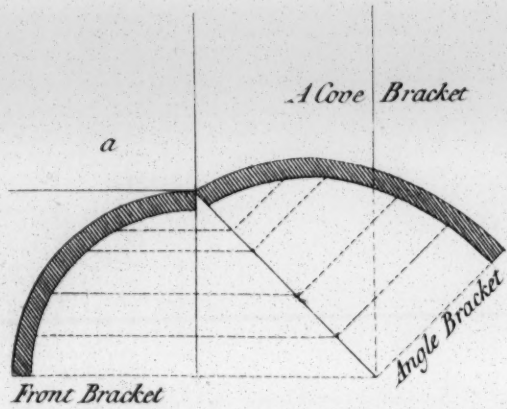
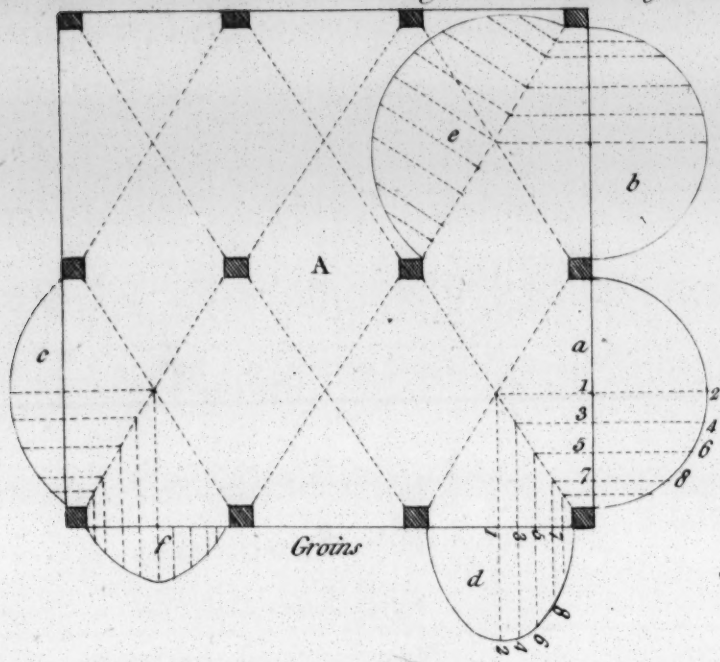
DIVIDE the Base Line *a* of the given Rib into equal Parts, and that of *d* into the same Number of Parts, and draw Lines to the Arch Line of *a*, and likewise in *d* at pleasure; then take 1, 2, 3, 4, 5, 6, &c. from *a*, and transfer them to *d*, as 1, 2, 3, 4, 5, 6, &c. and thro' the Point 1, 2, 4, 6, 8; trace the Arch Line over *d*, and so for the Rest, as is plain to Inspection. The Angle Bracket is done in the same Manner.

To describe a Circular Soffit in a Circular Wall, as in *B*. Draw the Cord Line of the Arch, or Base Line so called, to touch the Arch of the Wall, then draw the Semi-Circle and divide the Round of it in a Number of equal Parts as here into 9, but the more Parts the truer the Work, and draw them to the Arch of the Wall, then stretch out the Arch Line at Length as in *e*, and transfer the Parts that are between the Wall and Base Line, as 1, 2, 3, 4, 5, 6, &c. to *e*, which gives the Edge of the Soffit or Pannel.

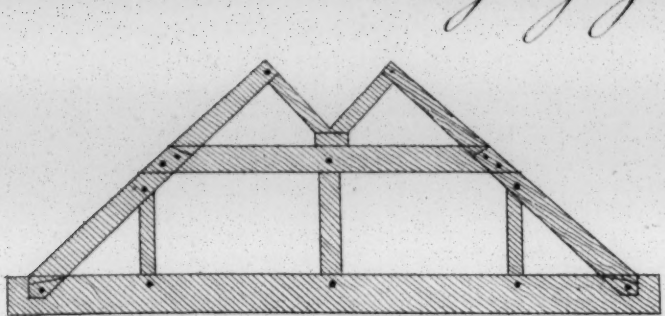
To describe a Circular Soffit in a strait Wall on flewing Jambs. Continue the flewing of the Wall till it meets at *b*, then set the Compasses at *b*, and draw two Arches to the Thickness of the Wall, then put on the Girt of the Soffit *c d*, which gives the Length of the Soffit and Edge of ditto.

Groins, Angle Brackets &c.

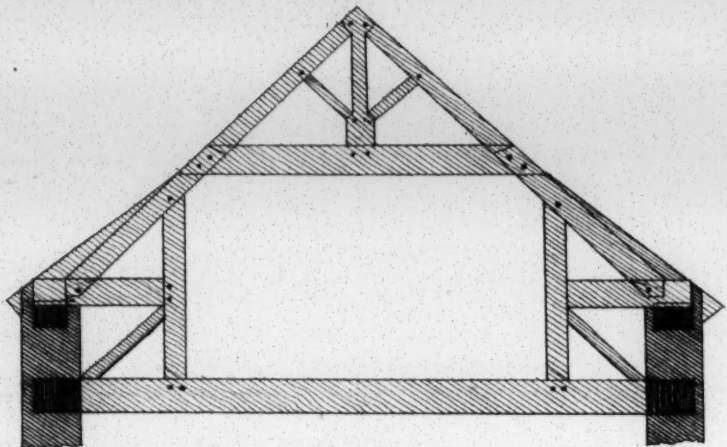
Plate IV.



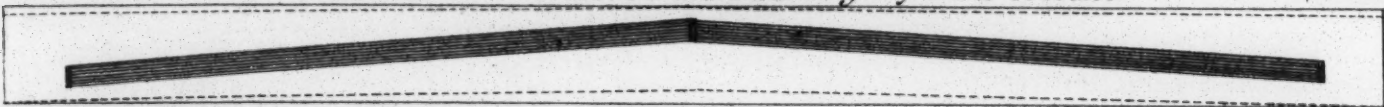
Trussing Girders Floors &c.



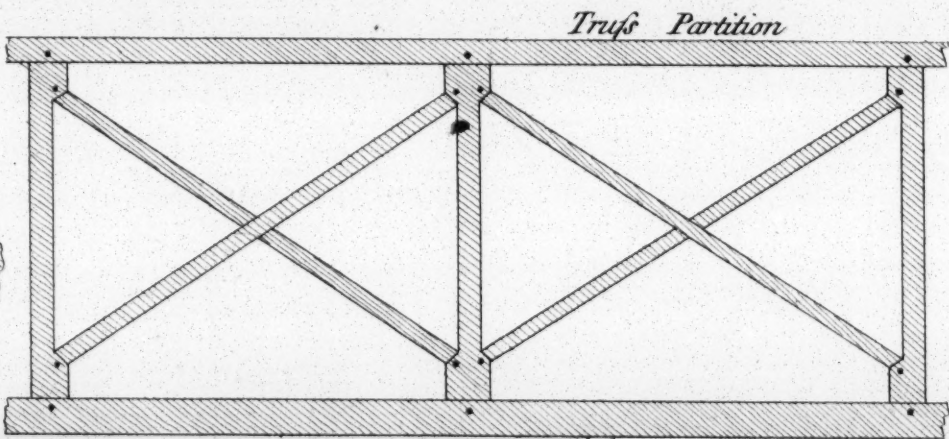
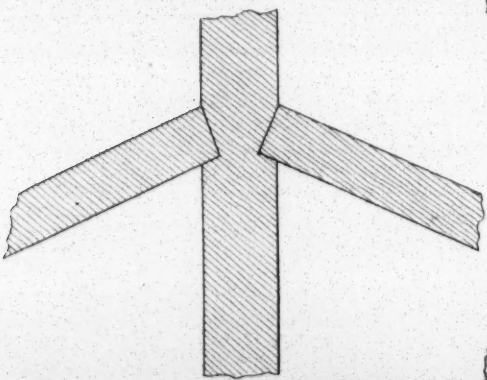
The Dovetail to have one Inch and Quarter Draft on each Side the Beam.



The Girder to be Cut one Inch Camber in 20 Foot &c. notwithstanding they are to be Trussid



The Truss to be of Dry Oak about 4 inches Square, to have Iron Plates at the Ends & Meetings.



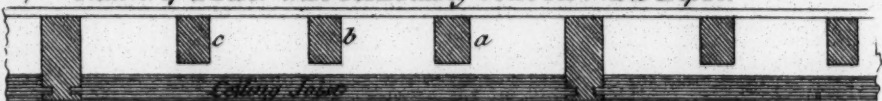
Binding Joist

Section of a Bridge Floor

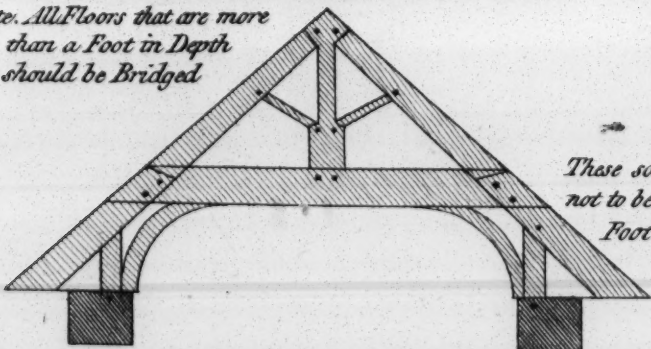


Binding Joist

Section of a Floor with the Binding Joist the whole Depth.

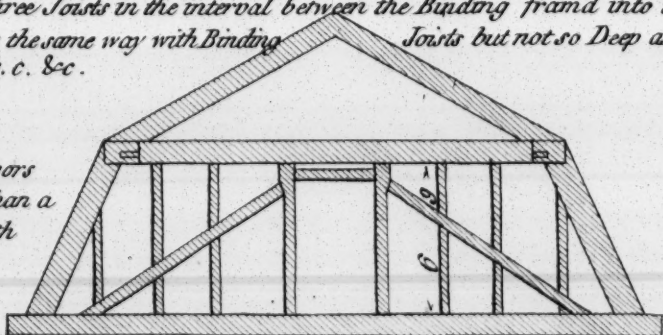


Note. All Floors that are more than a Foot in Depth should be Bridged



These sort of Floors not to be more than a Foot in Depth

with three Joists in the interval between the Binding fram'd into the Girders the same way with Binding Joists but not so Deep as ditto as a. b. c. &c.



Curb Roof.

To face P L A T E VI.

Figure *A*. Plan and Ledgment of a Roof, shewing how to find the Length and Backing of Hips, Valley, &c.

TO find the Length, take the Base Line of the Hips $a b$, $b c$, and $b e$, and set them on the Base Line of the principal Rafters, as $b a$, $b c$, $b e$, and draw Lines from the Top of the Rafter to $a c e$, which is the Length of each Hip. Or the Length may be found by setting up the Perpendicular from the Base Line of the Hips, as $b g$, and draw the Line $g a$, is the Length of the Hip. To Back the Hip, lay down the Thickness of the Hip at the Angle of the Plan, as H , and draw Lines to range the Plates, will shew how much Wood is to come off in the Backing; that is, the Mould must be a Piece of Wood as thick as the intended Hip, and cut it to the Splay or Pitch of the Hip at the Foot, setting it on the Angle of the Plate in the Direction of the Hip, mark it under by the Side of the Plate; gives the true Backing in any Case required. A very sure and safe Way for the Backing.

Figure *B* is the Plan of an M Roof, with Hip and Valley in Ledgment, &c.

Note, The Back of the Hip is found another Way, as in the Plan *A*. by drawing a Line at Right Angles, cross the Base Line of the Hip, as $r d g$, or on any Part of the Base Line, and set one Foot of the Compass at d , and extend to the nearest Part of the Hip $g a$, and turn it on the Base Line, as at r , then draw the Lines from the Point r to $g r$, on the Edge of the Plate, which is the Backing of the Hip required. This will do in any Case, square or bevel.

Plan of Ledgment of Roofs.

Plate VI.

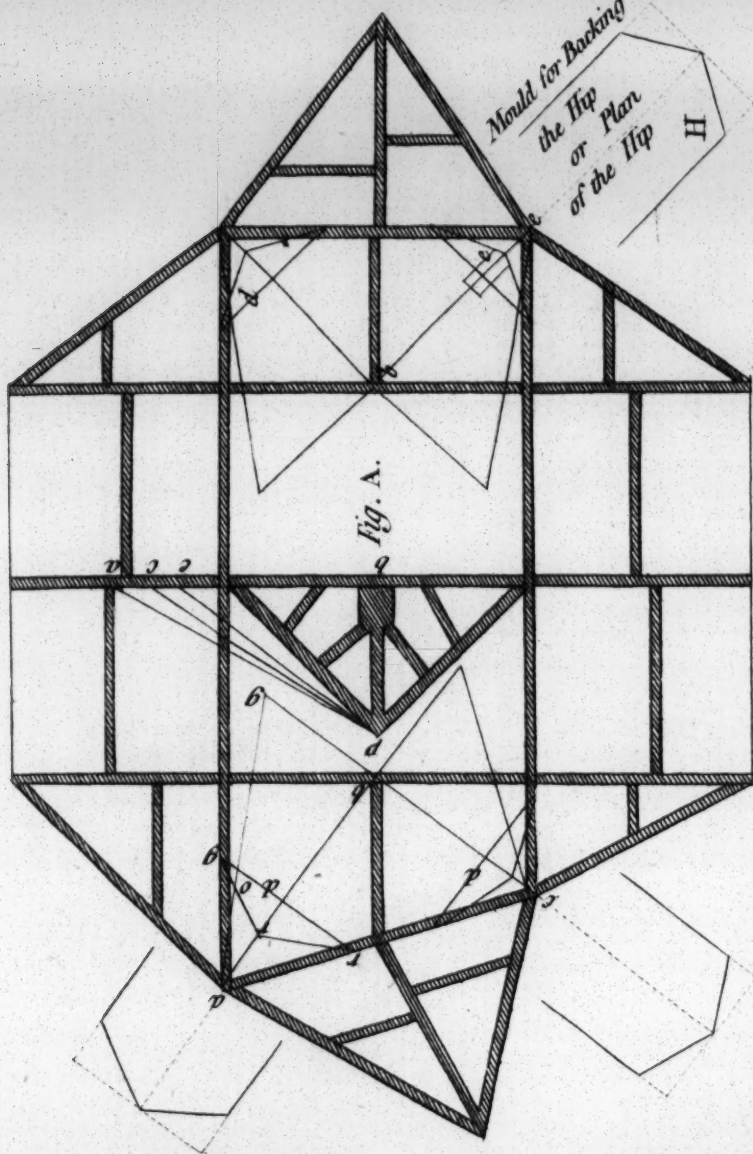


Fig. A.

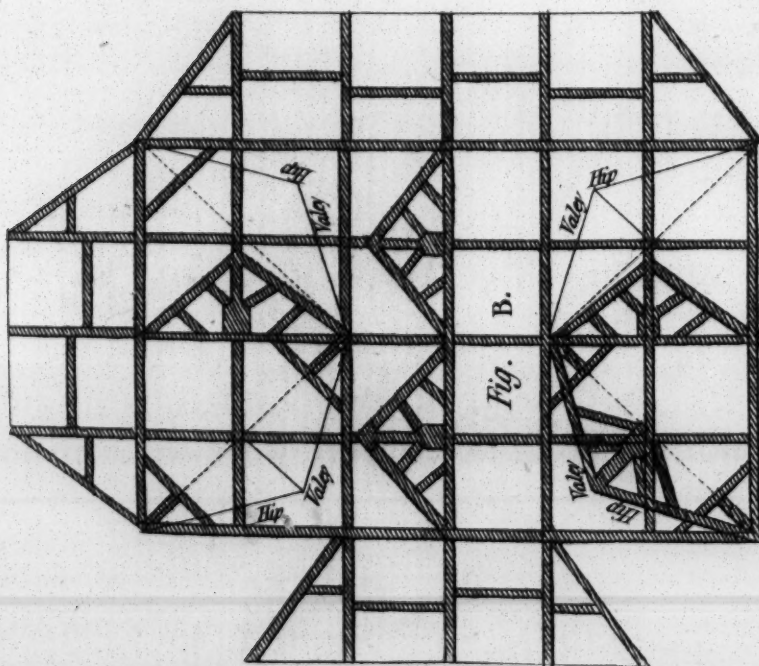


Fig. B.

Two Roofs in Ledgment shewing how to find the Length and Backing of Hips

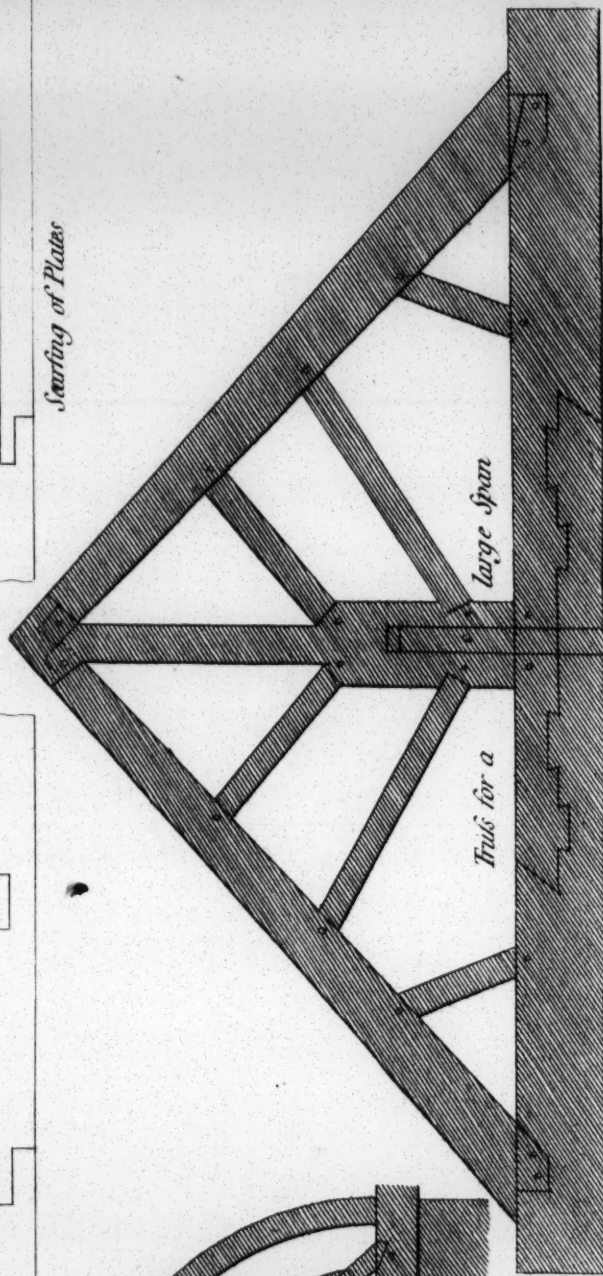
Square or Round in any Case required



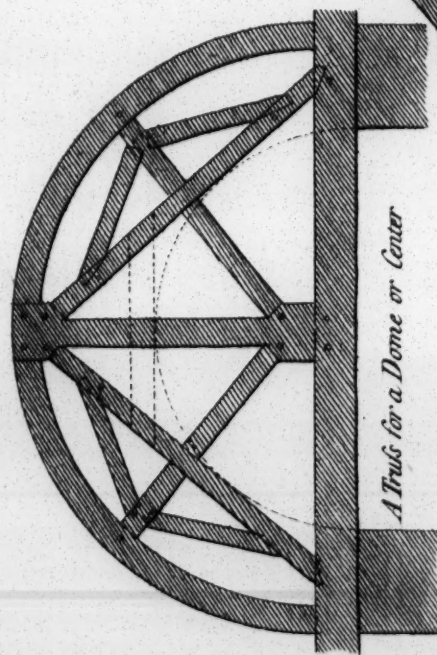
Scarfing of Plates



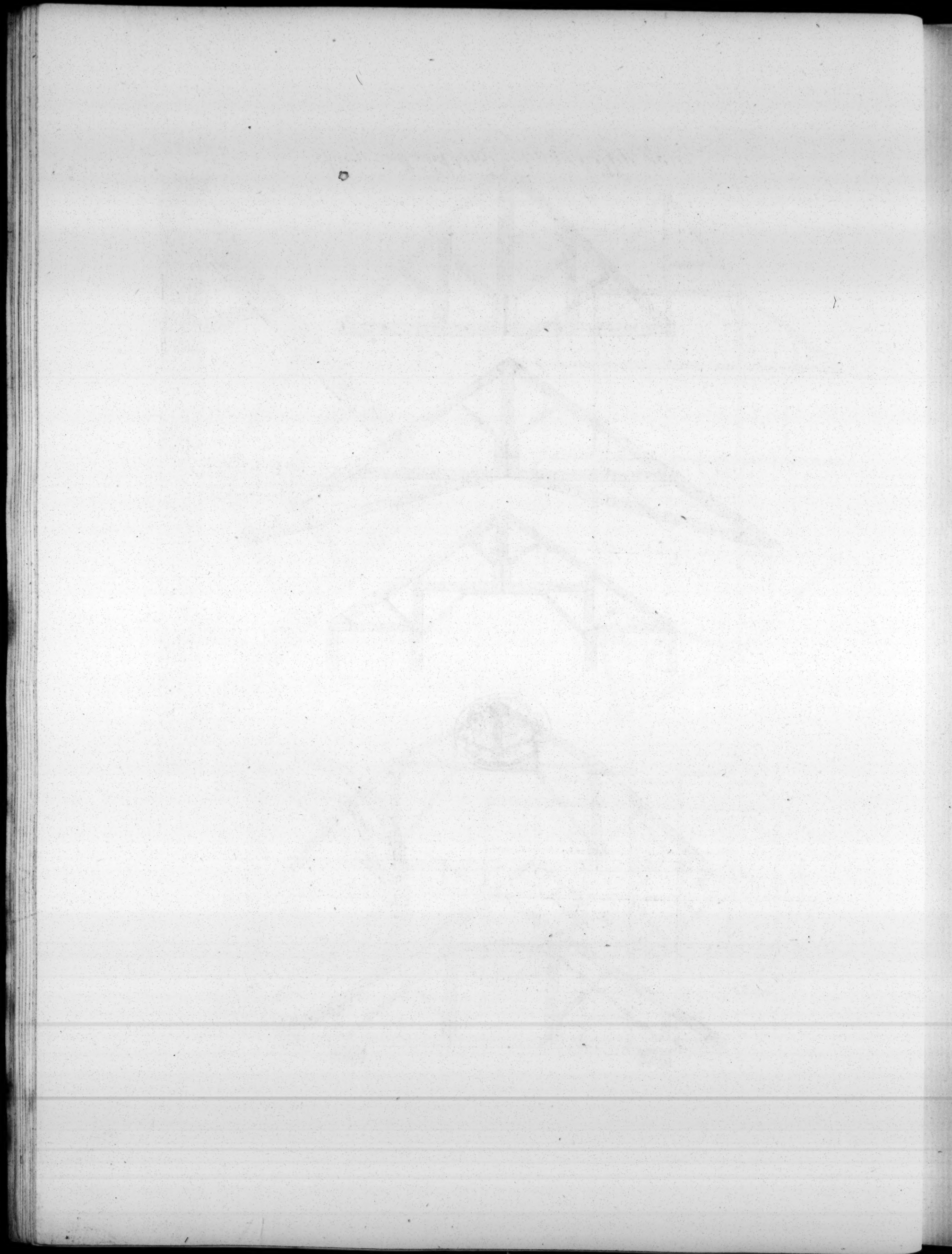
Scarfing of Beams



Truss for a large Span

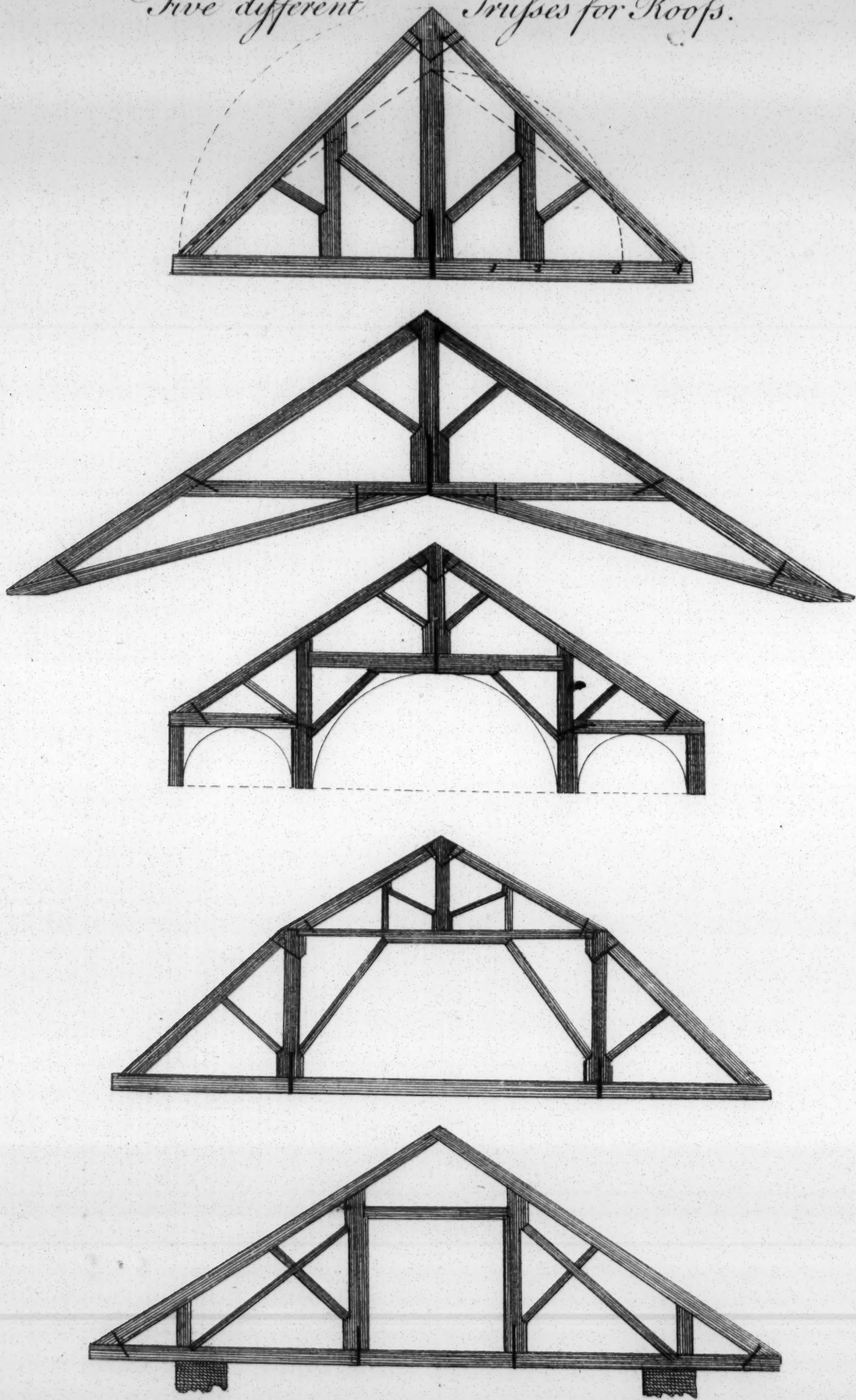


Truss for a Dome or Center



Five different Trusses for Roofs.

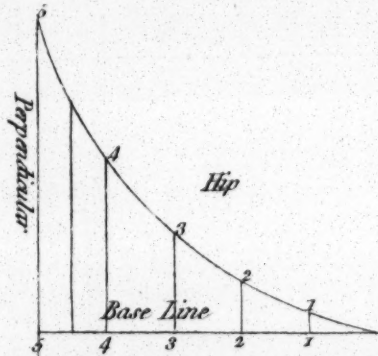
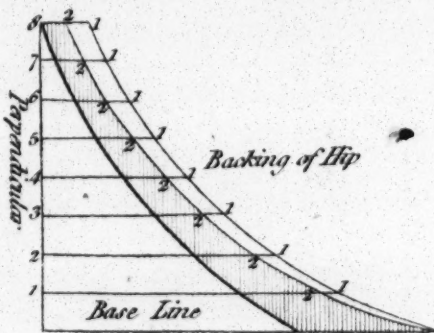
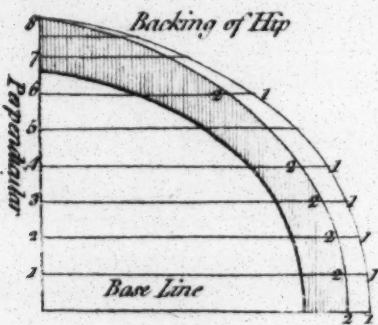
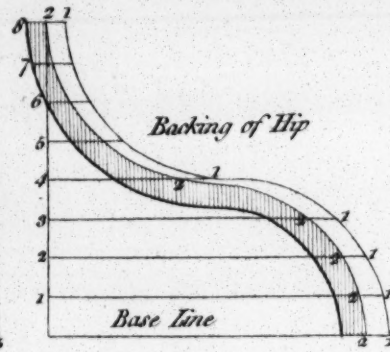
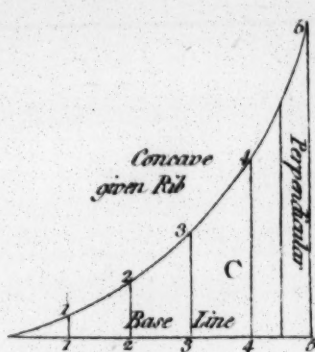
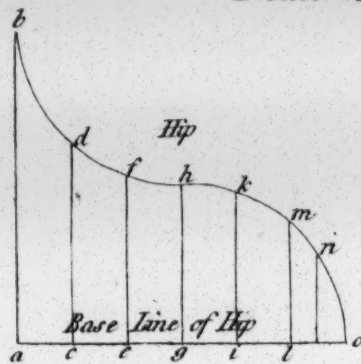
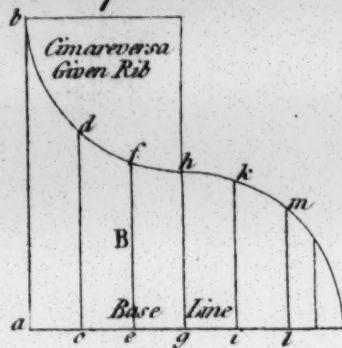
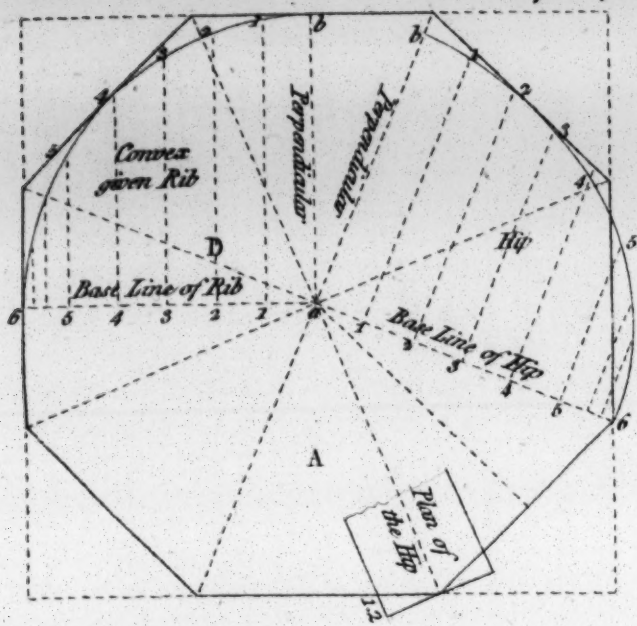
Plate VII.





Hips for Roofs &c.

Plate VIII.



The manner of finding the Length and Backing of Curve Line Hips in any Case required. Suppose the Octagon Plan A. to be Roof'd with the Convex B. or the Concave C. or the Convex D. in the Plan. Divide the Base Line of the given Rib into any number of equal Parts and draw Lines from those parts on the Base Line to the Back of the Rafter, a b, c d, e f, g h, i k, l m, and all the others as 11, 22, 33, and so on. Then the Base Line of the Hips must be divided into the same number of Parts and Lines drawn up at Pleasure as a b, c d &c. from the Base Line of the Hips, then take the several Heights of the given Ribs and set them on the Hip Lines, then trace them through those Points b d, f h, k m, n o, that will give the Curve or Edge of the Hip and the same for all the others and for the Backing of the said Hips, there is a Plan of the Hip at the Angle of the Plan A. which shows how much Wood is to be Cutt off each side of the Hip. Divide the Perpendicular Height of the Hips into any number of equal Parts, and draw Lines Parallel with the Base Lines of the Hip. Then take the Distance from the Plan of the Hip to the Side of the Plan A. as 12 and put them on the Hips, as 12, 12, &c. which gives the true Backing in any Case required. Note when the parts are Set on at Bottom and Top of the Hip the Mould may be shifted and mark'd which shows the Wood to come off.

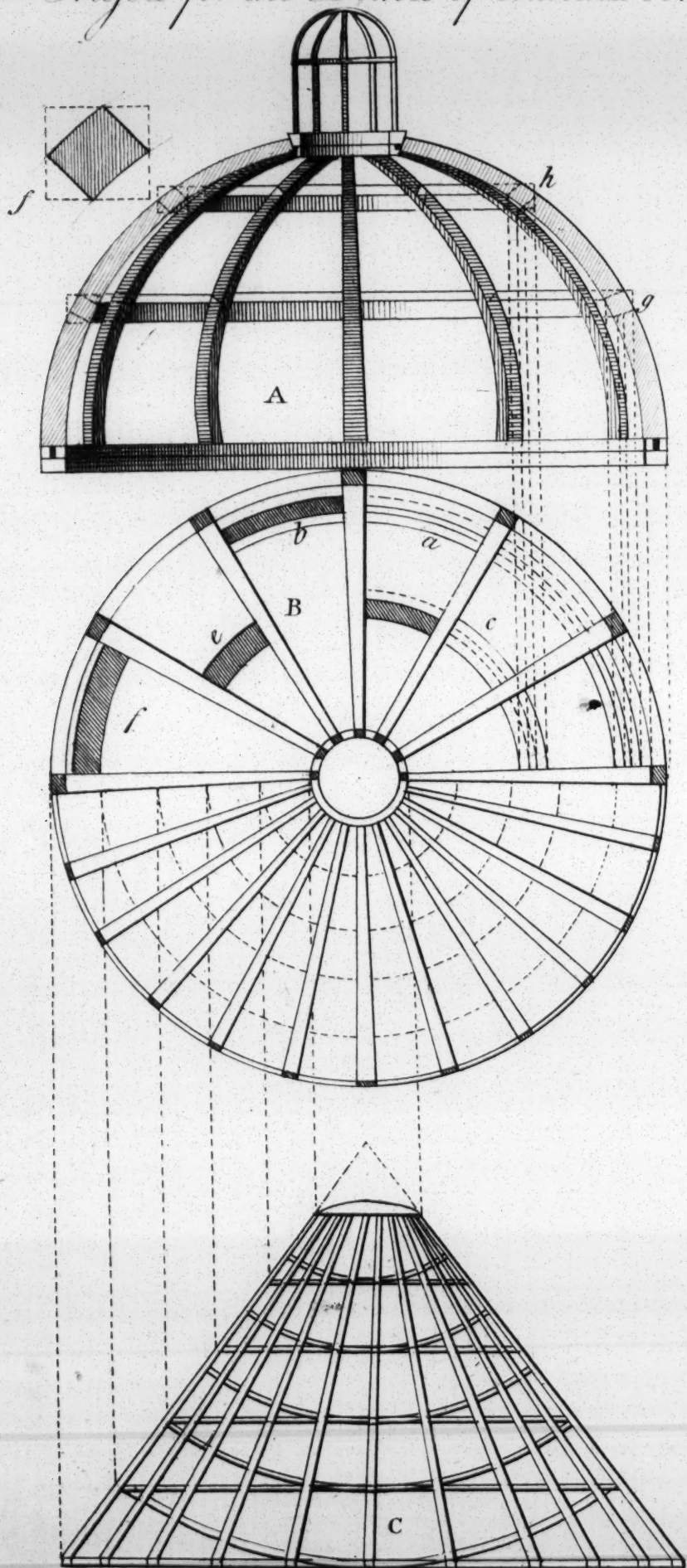
To face P L A T E IX.

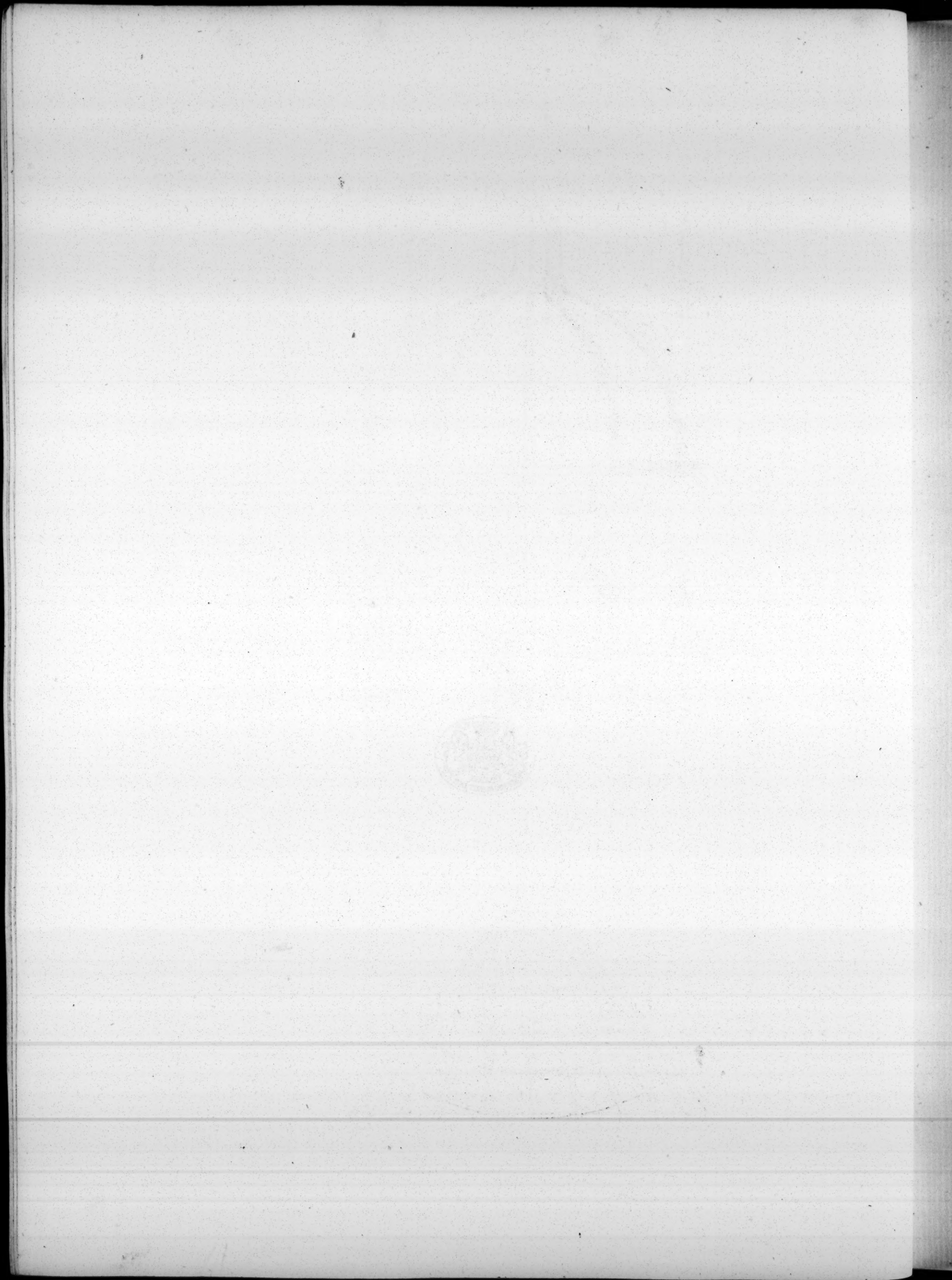
Trusses for the Domes of Churches, &c.

A. Is a Truss for a Dome, with a Lanthorn or Cupola at the Top, to give Light. B. the Plan; the Kirb or Plate to be in two Thicknesses, which is likewise best for the Ribs, and for the Kirb on which the Cupola stands. The Curve of the Dome A. is a Semi-circle, or will serve for a Semi-elipsis. The Moulds *f* and *c* in the Plan B, cut the Sweep of the Purlines; and the Moulds *b a* and *c d* are for the Top and Bottom of the Purlines. C. is a Cone or Lanthorn to light a Stair-Case, &c. the horizontal Bars must be squared in the same Manner as the Purlines in A. The Mould for cutting or squaring the Purlines, is like the bottom Mould *f* in B. so that if the Purlines be cut to the Thickness required as in the Section A, and also to the Mould *f*, then *a* is the Mould for the Bottom and *b* for the Top, as appears by the Lines let fall to the Plan B from the Purlines *g* and *h*; then C in the Plan is the Top and *d* the bottom Mould. *l* is the sweep Mould for the Top of the Purline *h*. By this Rule the Purlines may be squared, which completes the Work. If the Plan B, the Ribs and Purlines are in Size and Number, as the Cone C, it will do for a Lanthorn or Light to a Stair-Case, &c. the Manner of squaring the Ribs and Cross Bars is the same as the Dome.

Trusses for the Domes of Churches &c.

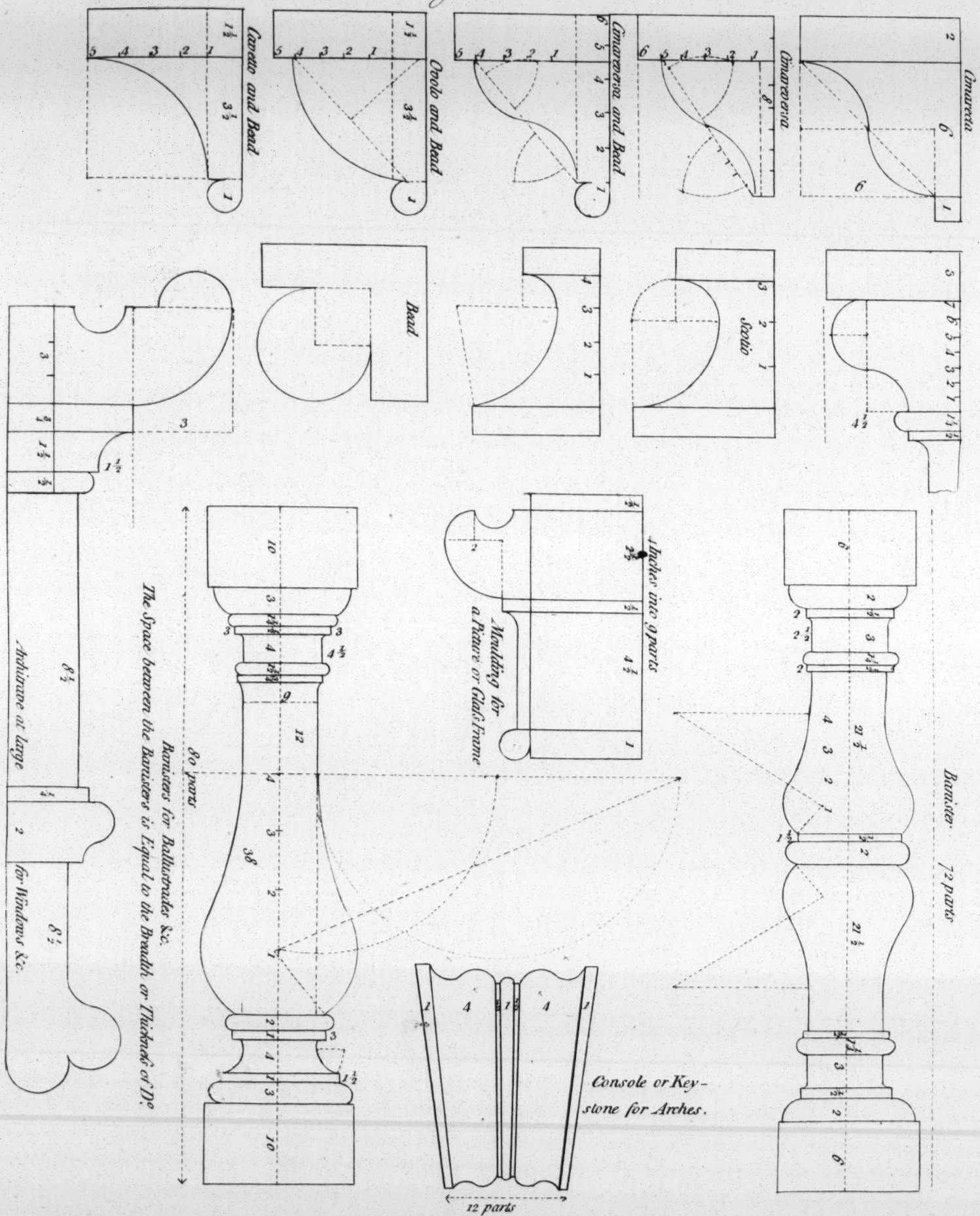
Plate IX.





Mouldings, Balustrades &c.

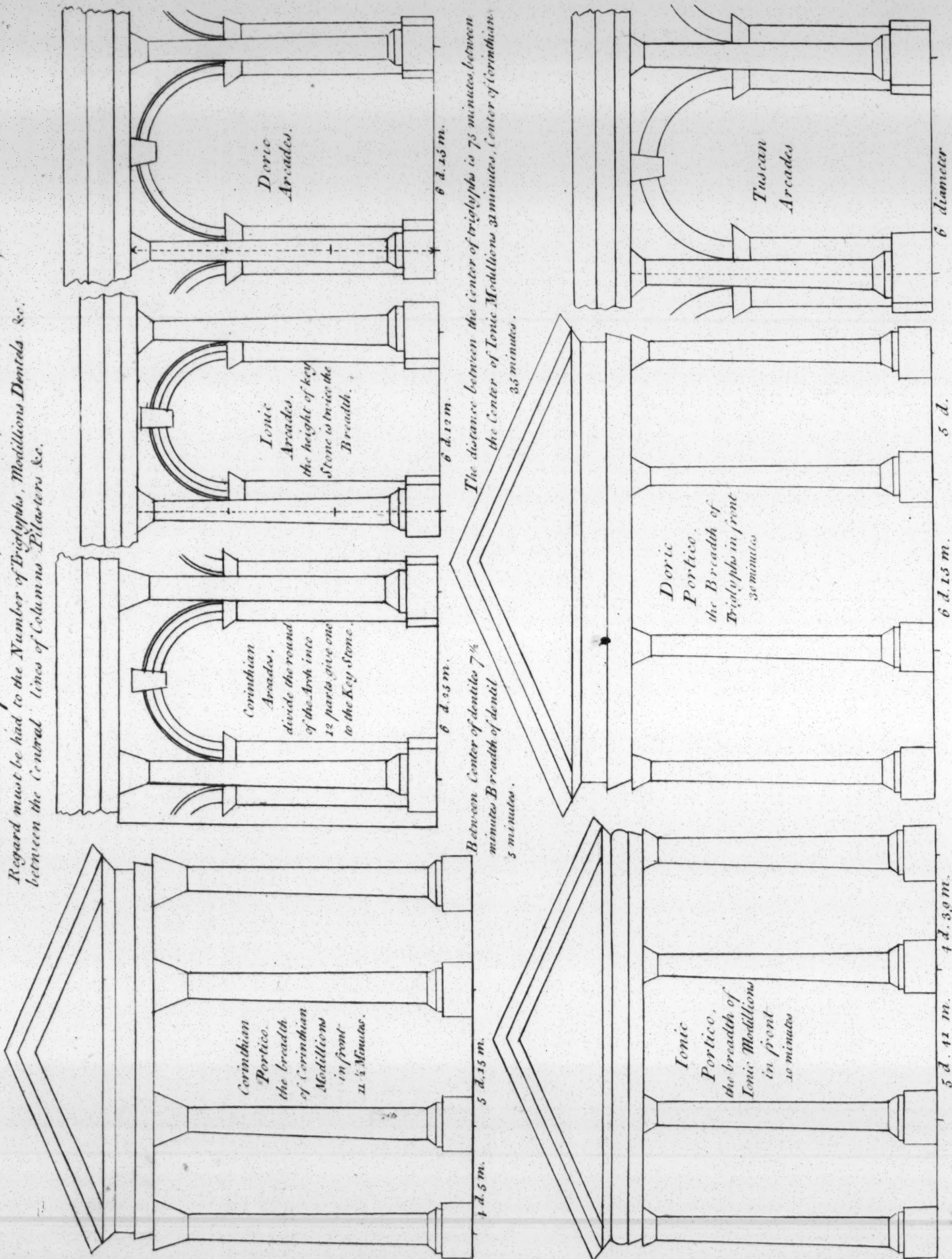
Plate X.

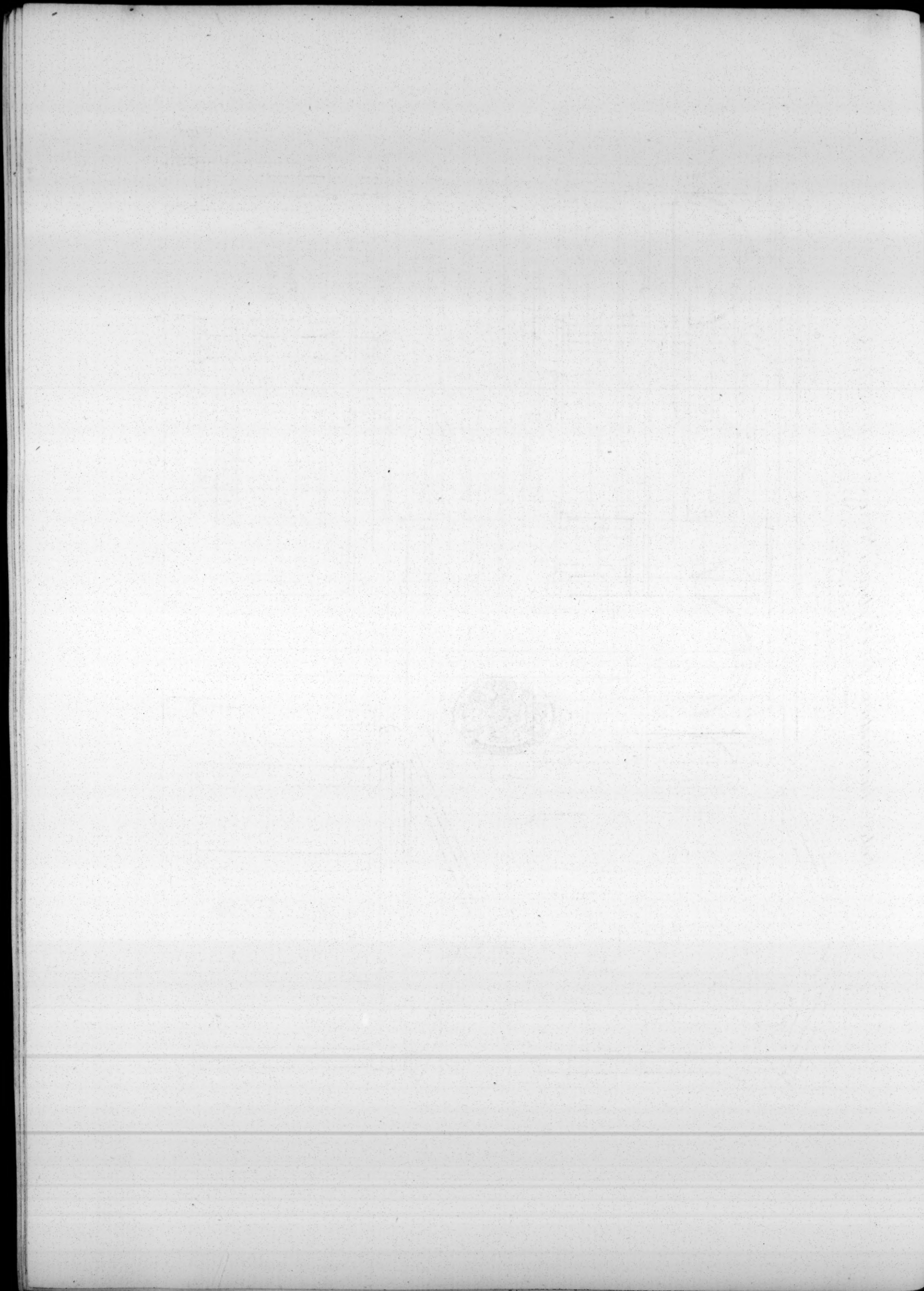


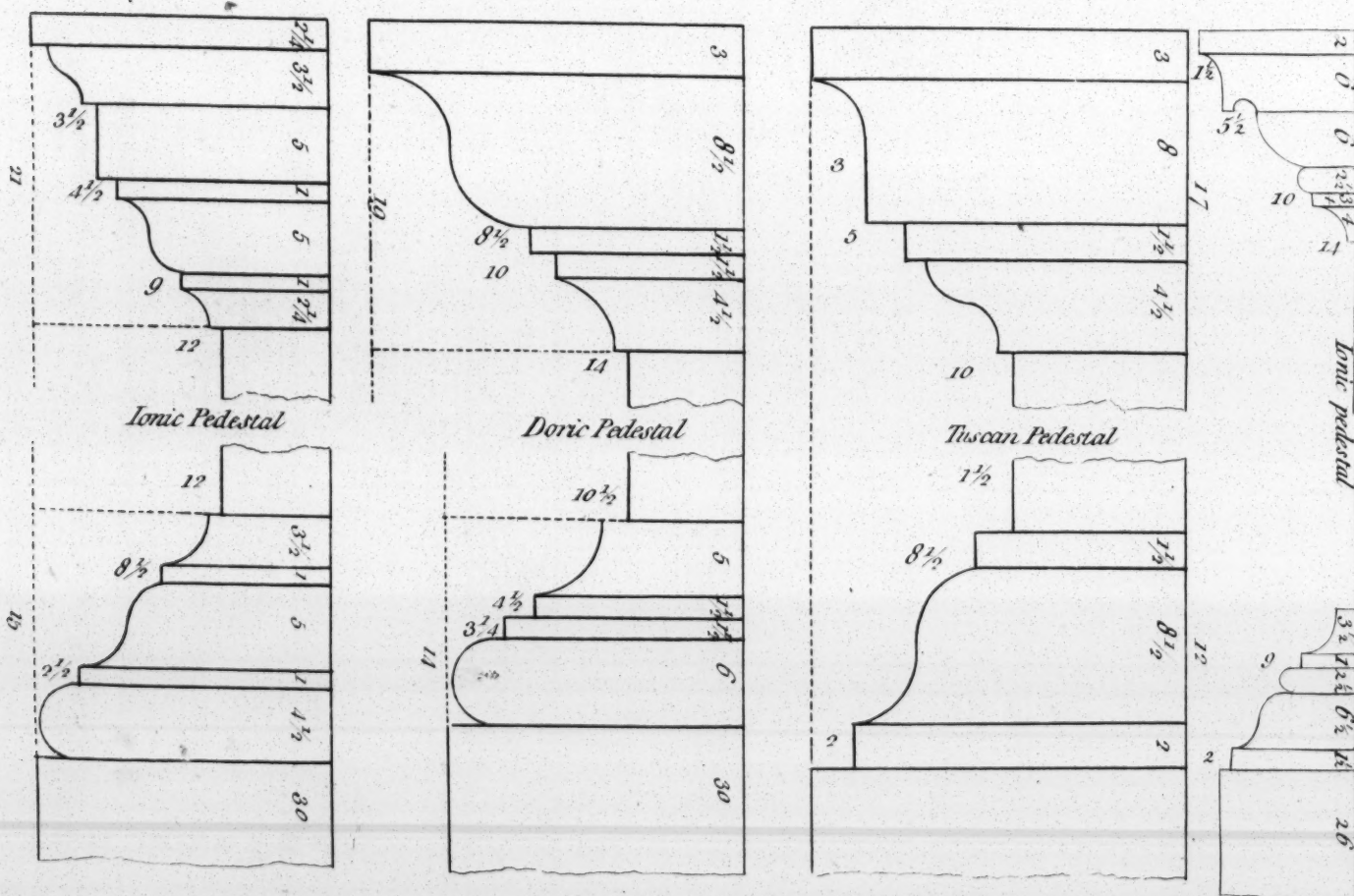
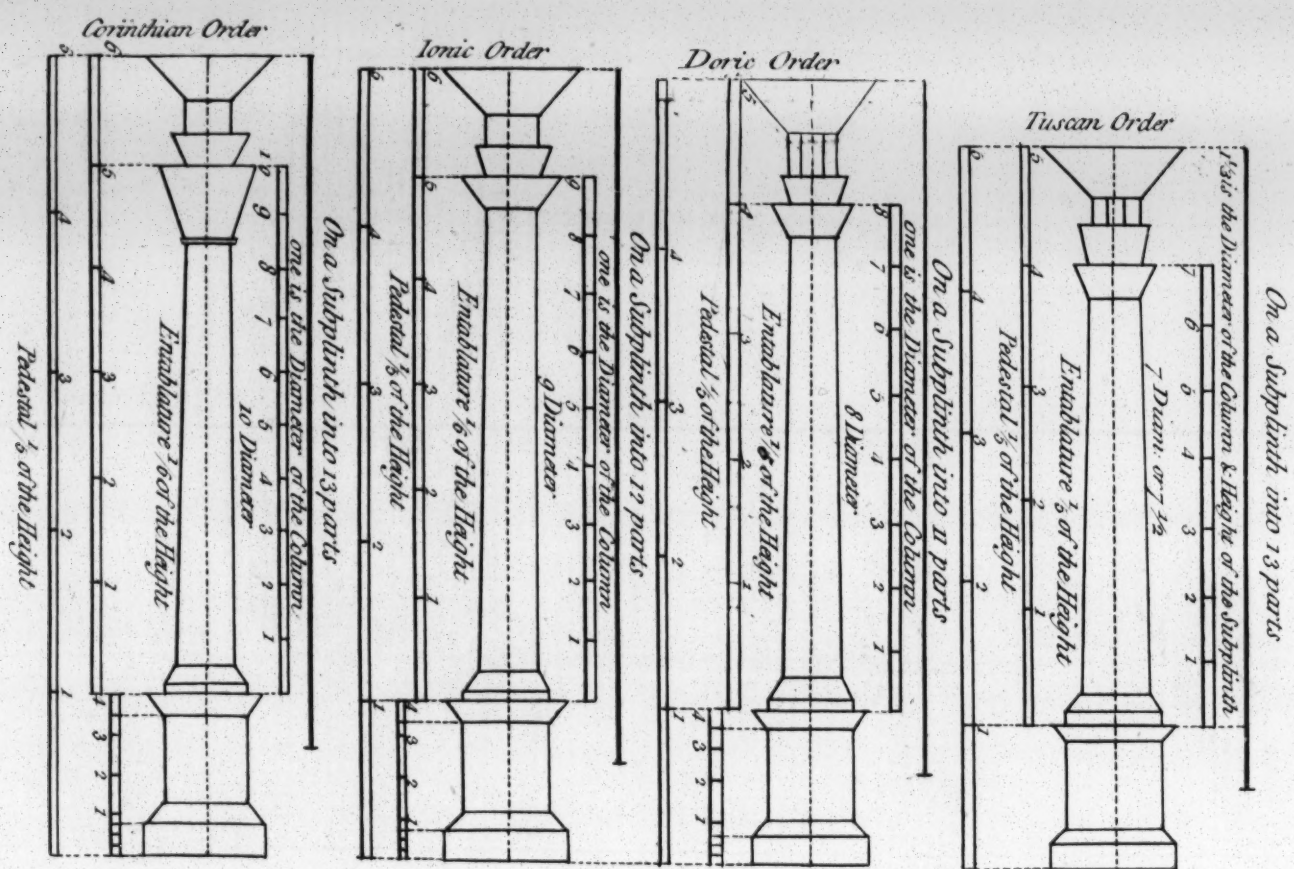


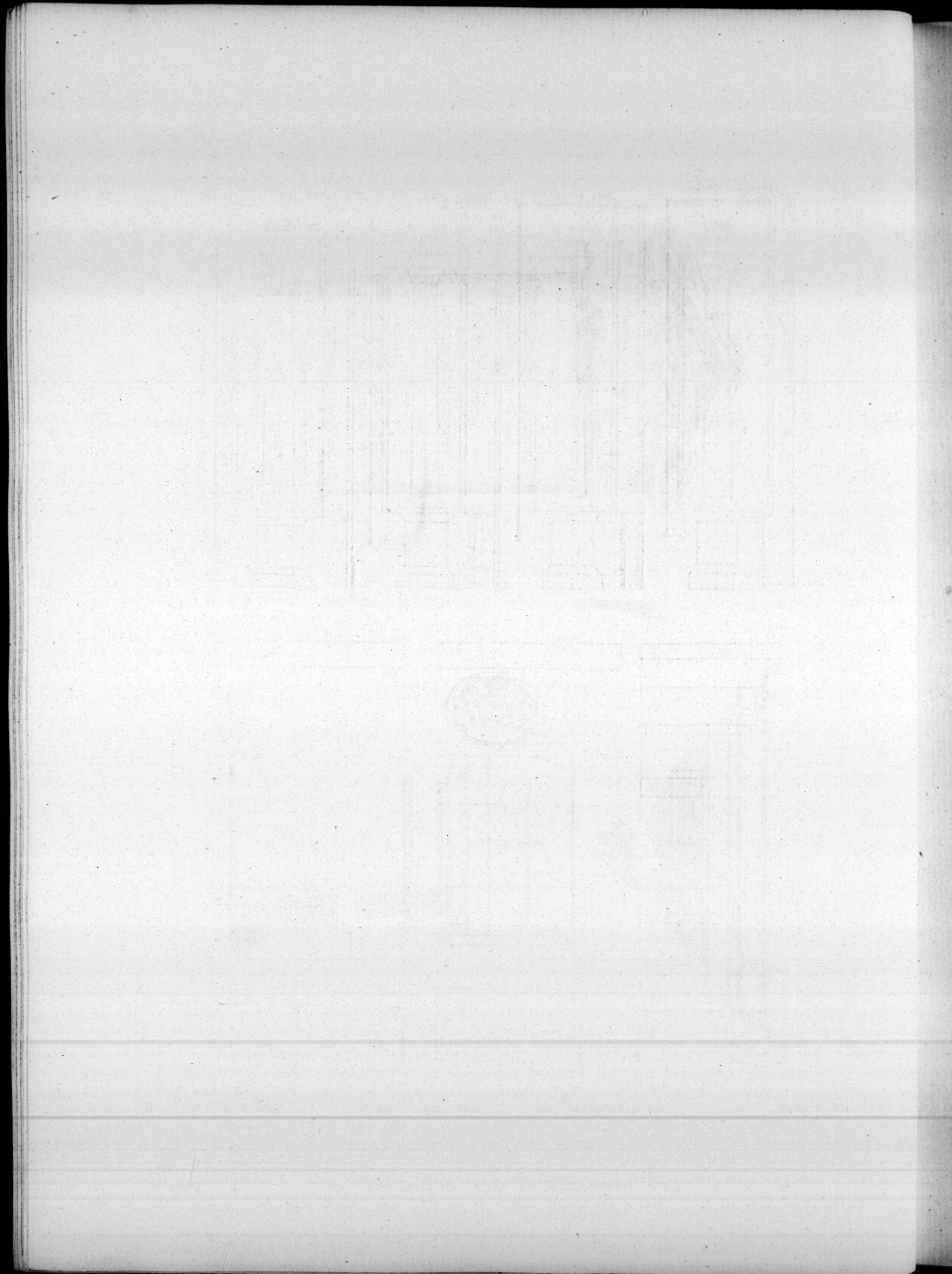
Intercolumniations for Portico's, Arcades, Colonnades &c.

Regard must be had to the Number of Triglyphs, Modillions Dentils &c. between the Central Lines of Columns Pilasters &c.

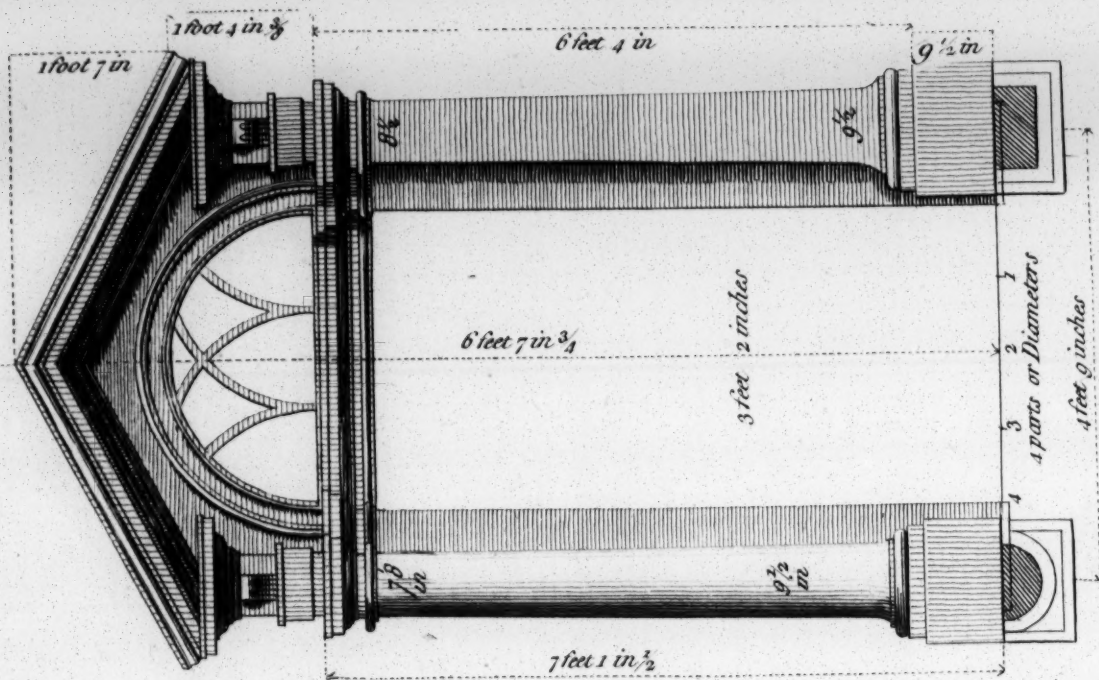




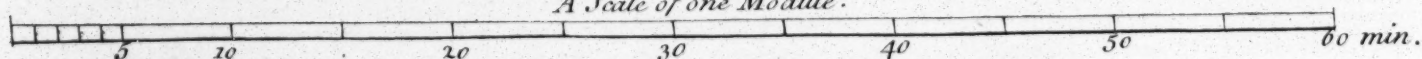




Frontispiece in the Tuscan Order.

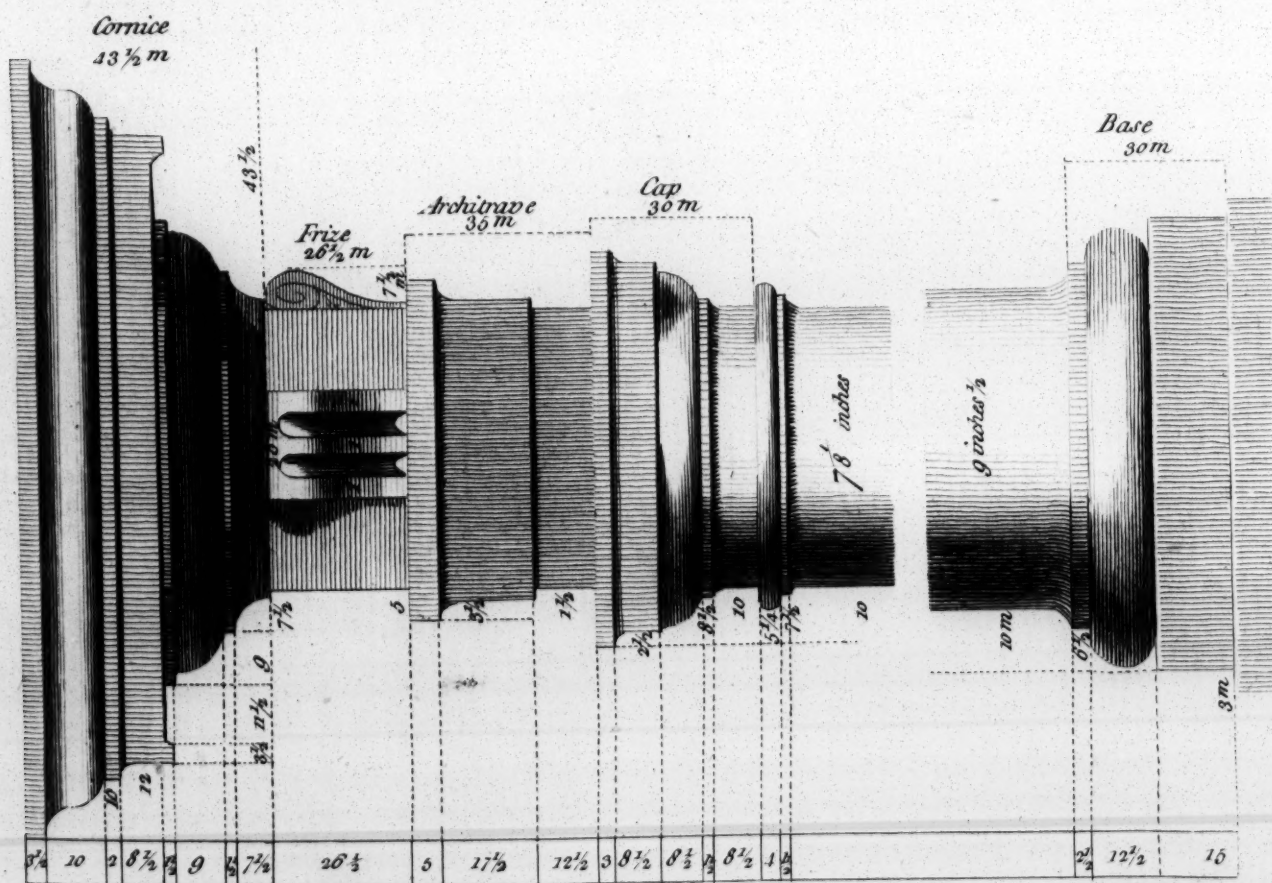


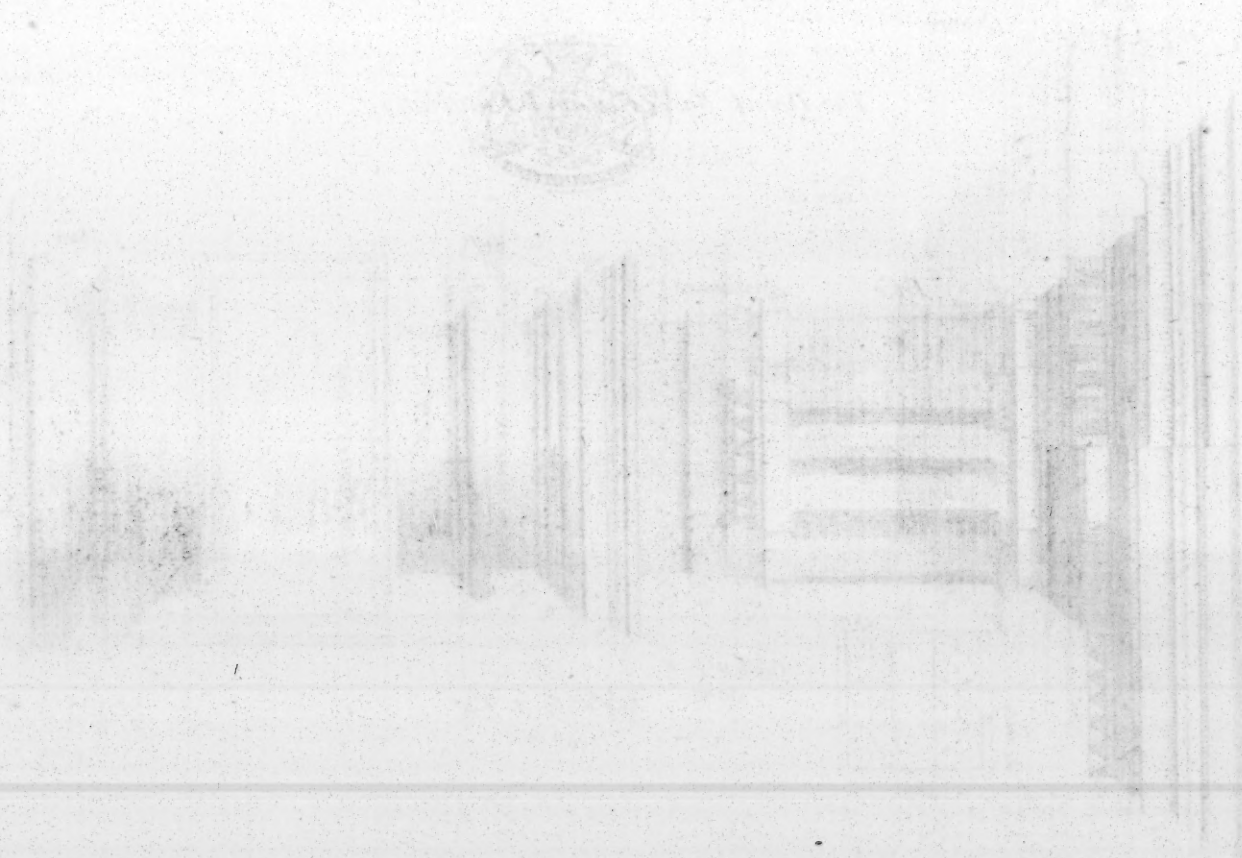
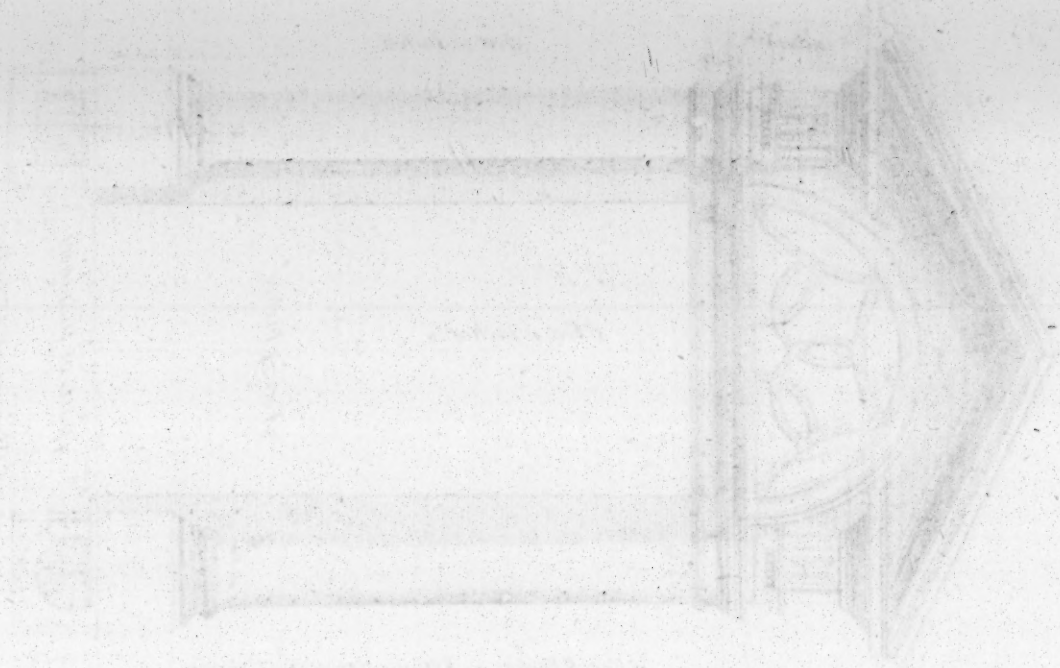
A Scale of one Module.

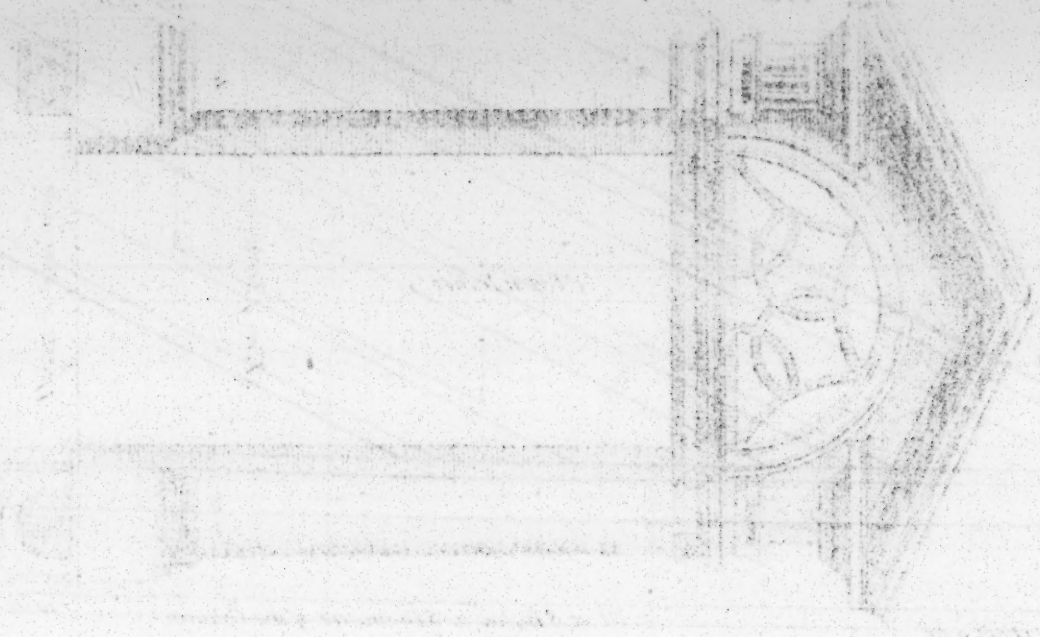


Divide the given Module into 12 parts and one of those parts into 5 gives the Minutes.

The Tuscan Entablature.







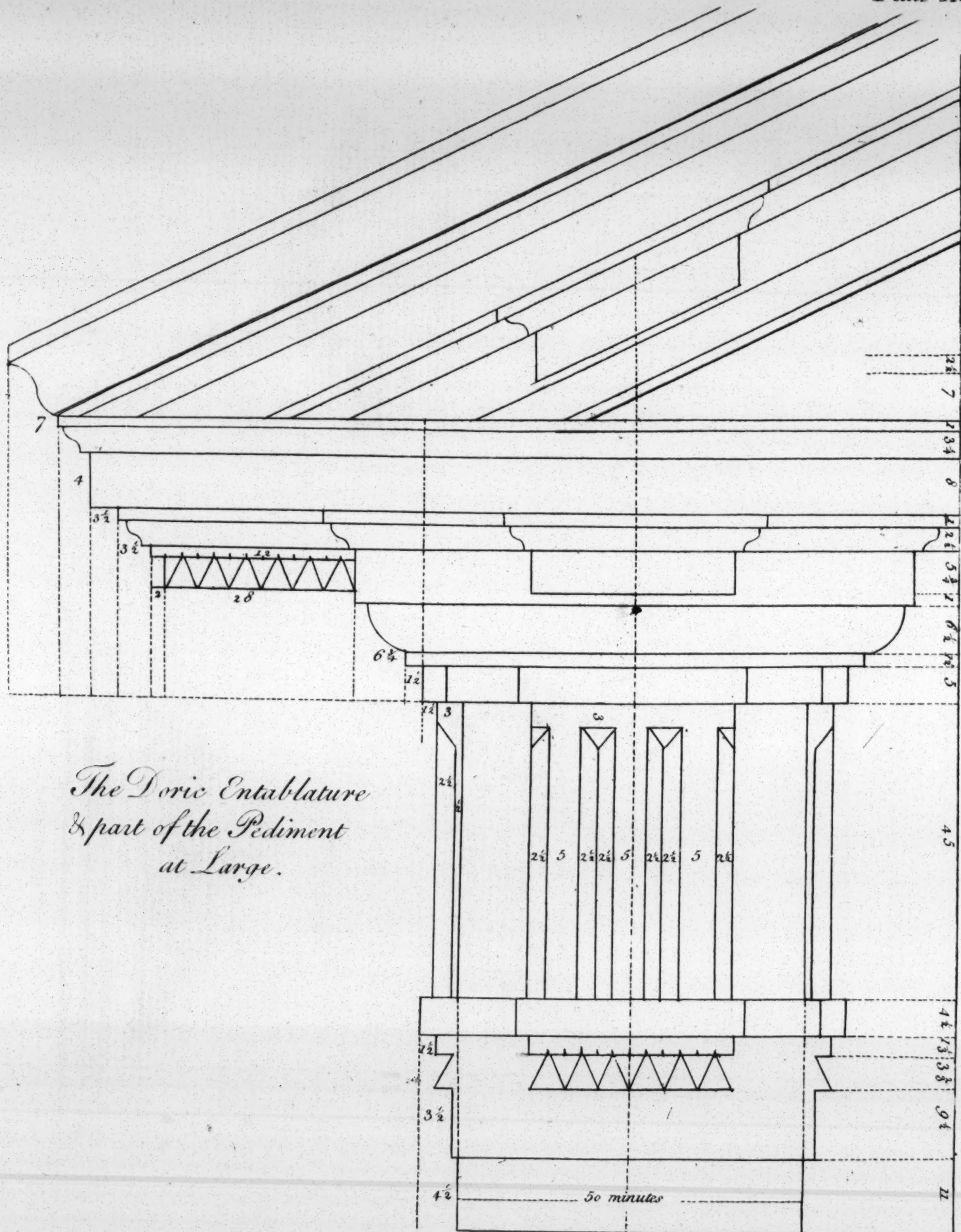
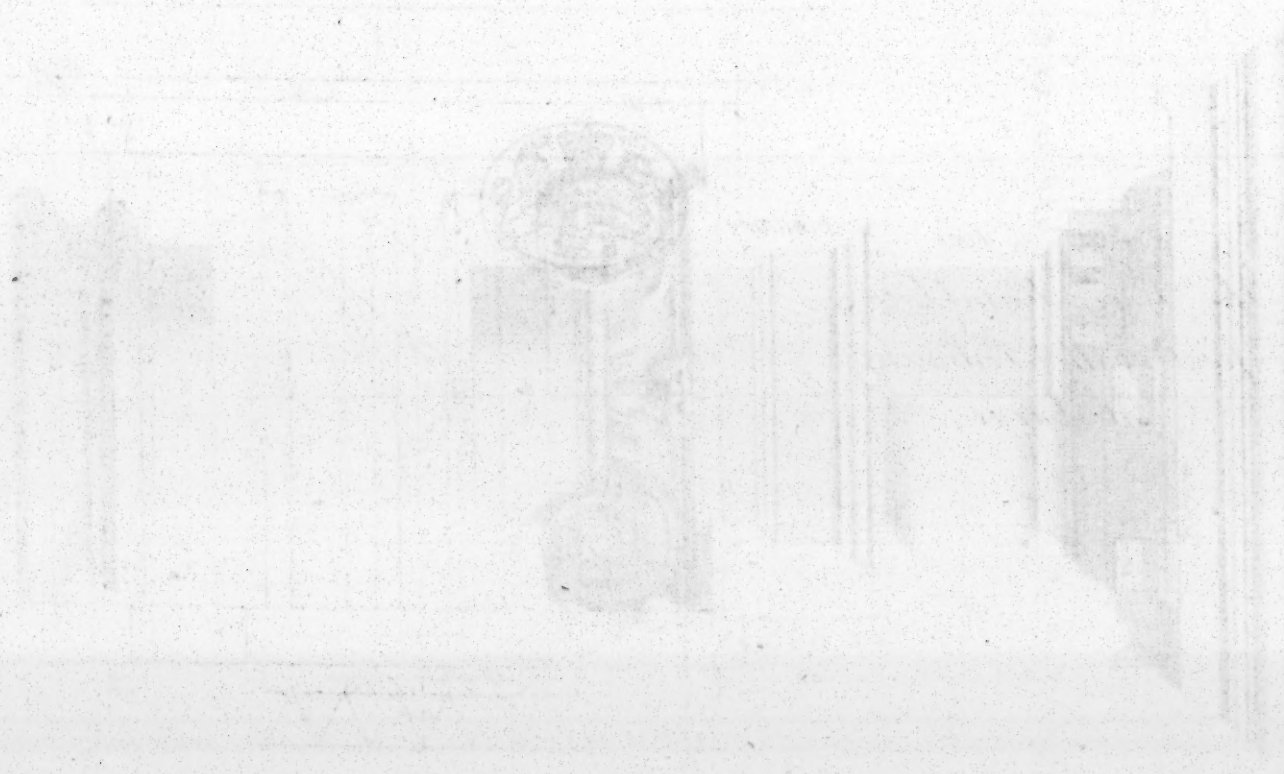
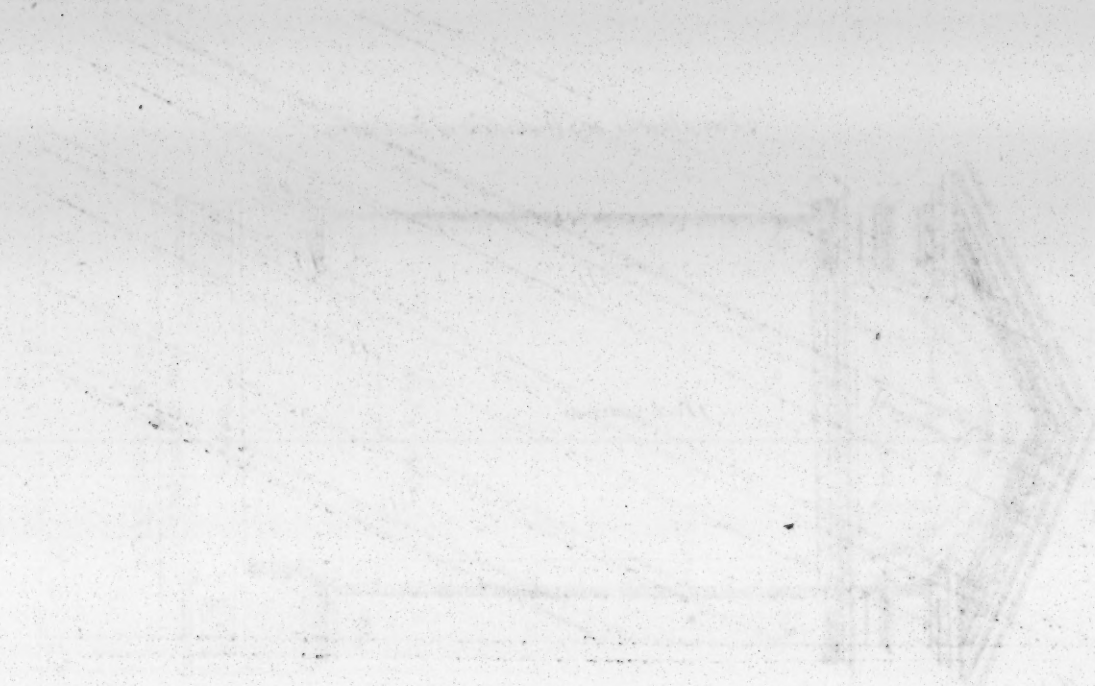
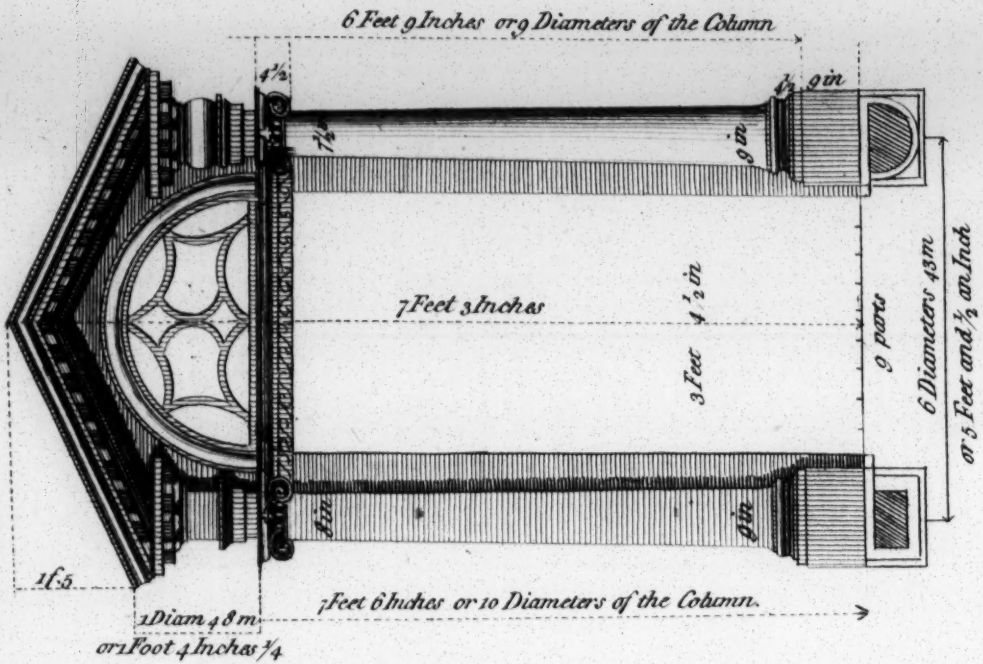


PLATE VII

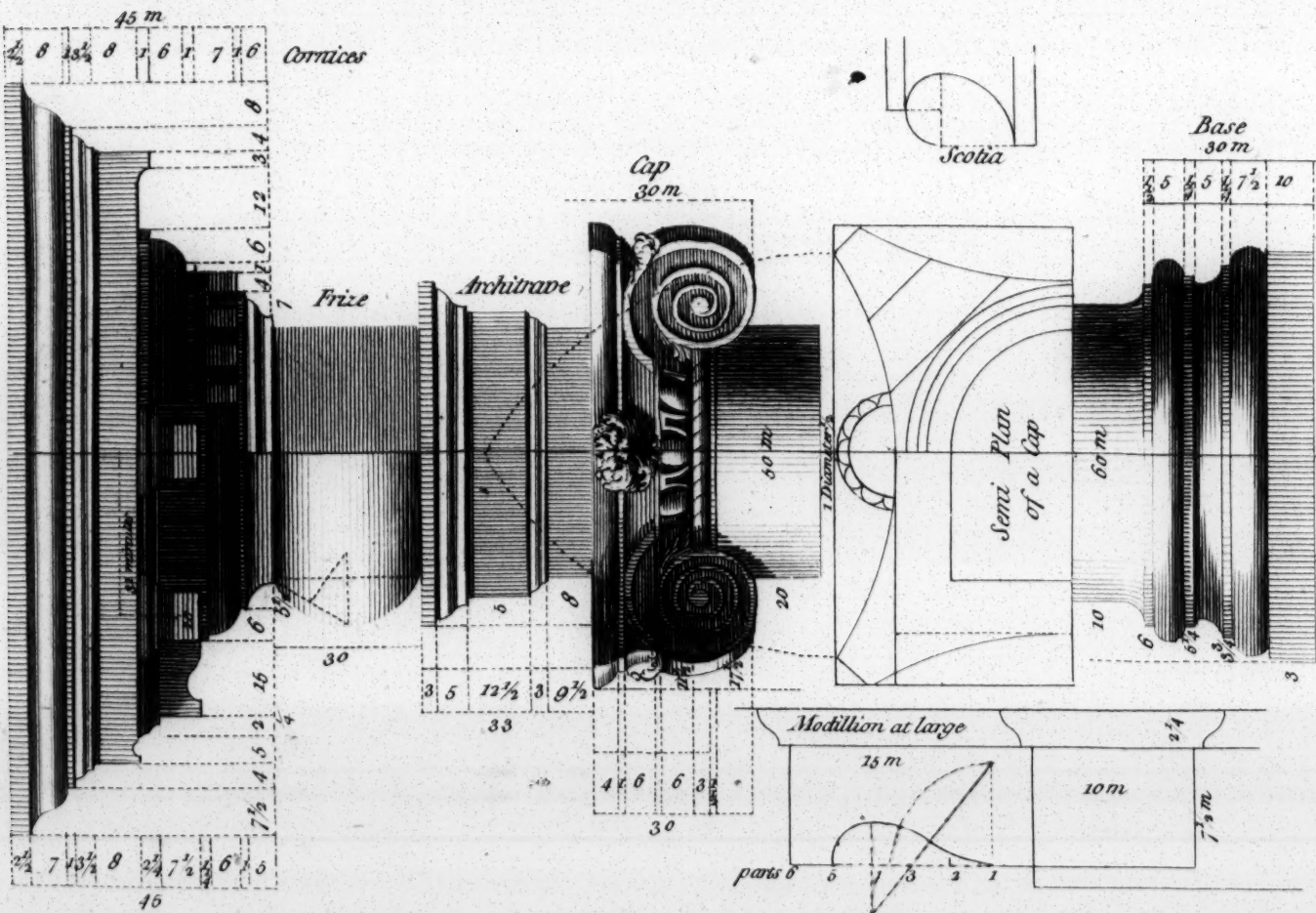


Frontispiece in the Ionick Order.

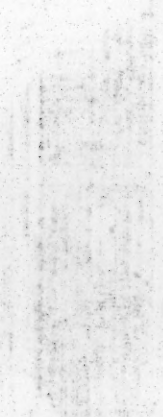
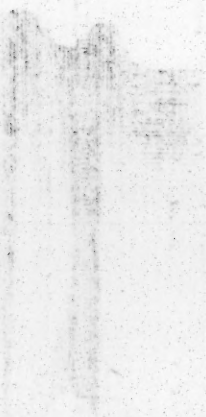
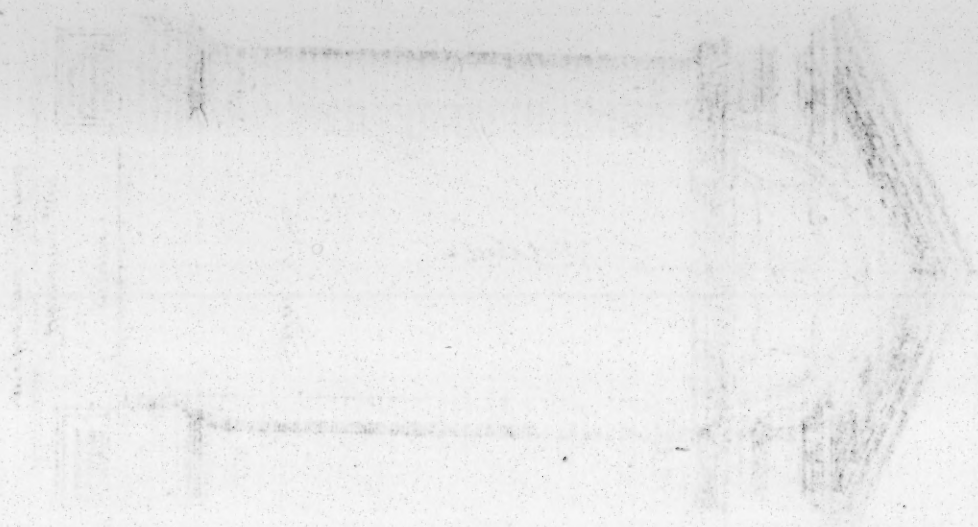
13. Modillions between the Central Lines of the Columns 31 minutes from Center to Center of the Modillions.
Divide the Width of the Door into 9 parts, each part is equal to half the Columns Diameter or 4 Inches $\frac{1}{2}$.

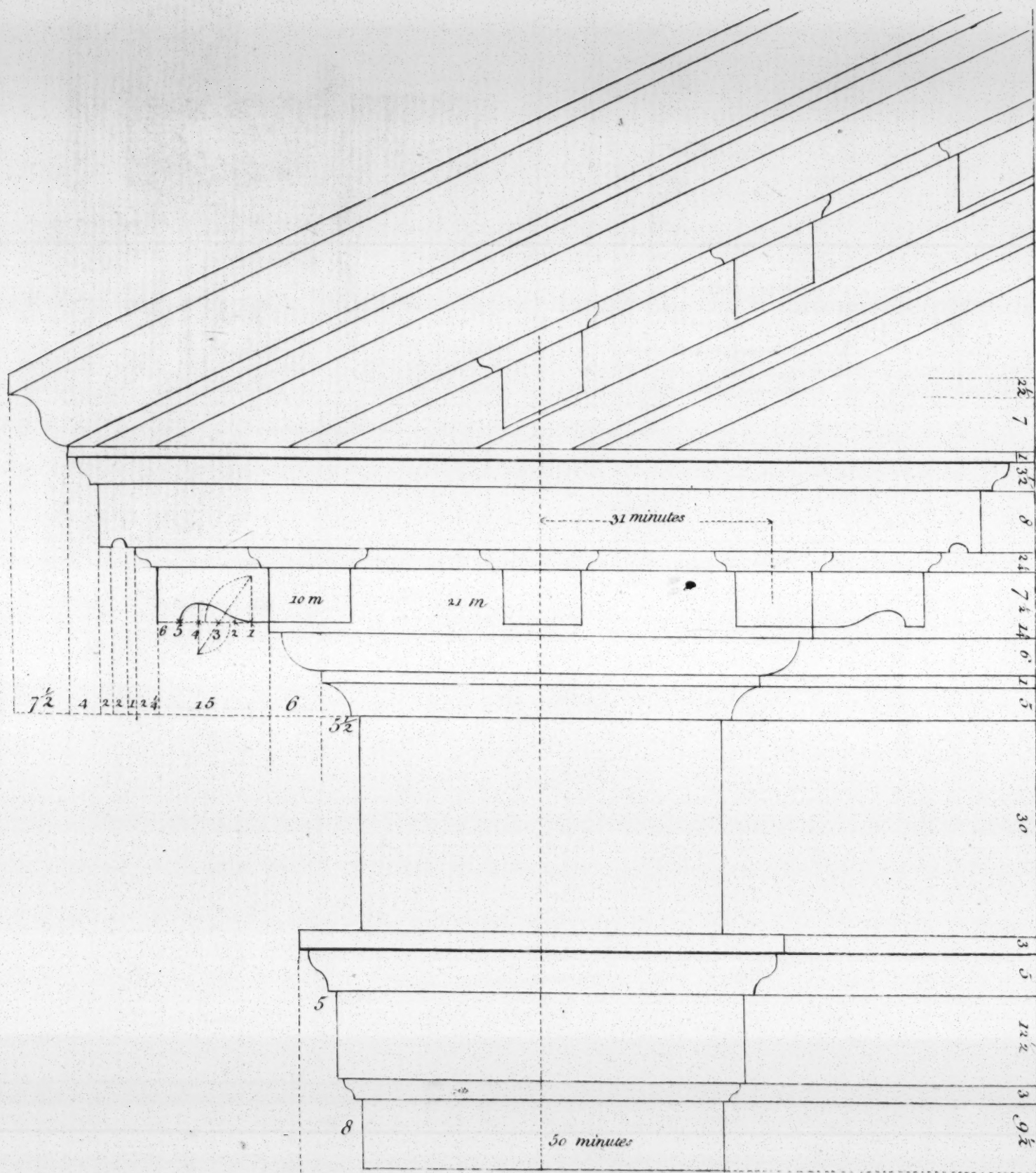


Ionick Entablature.

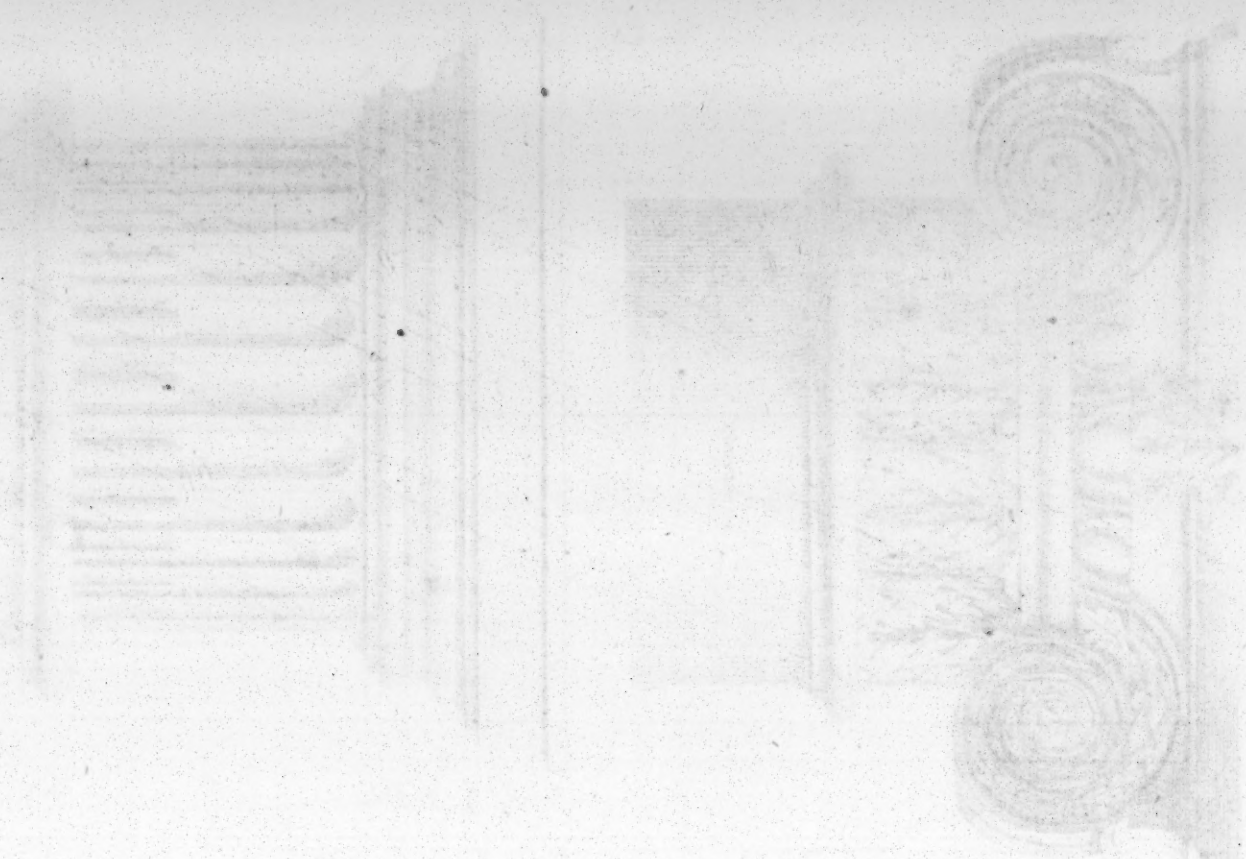


177

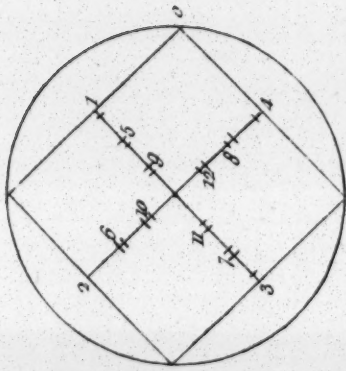
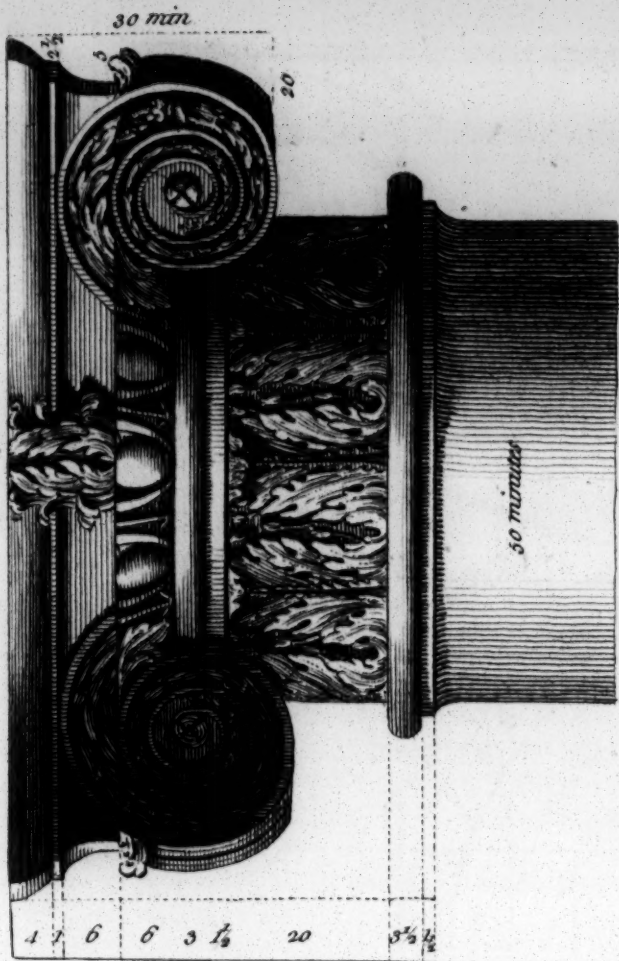




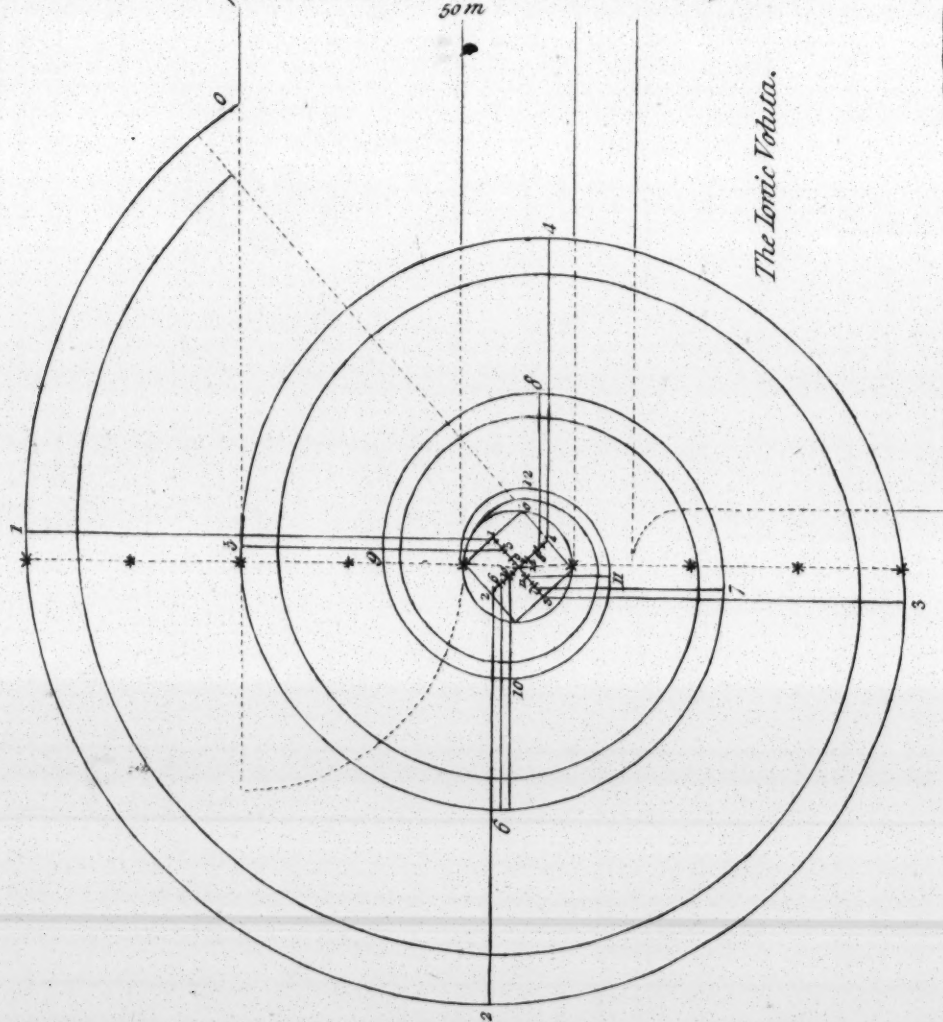
The Ionic Entablature with part of the Pediment at Large.



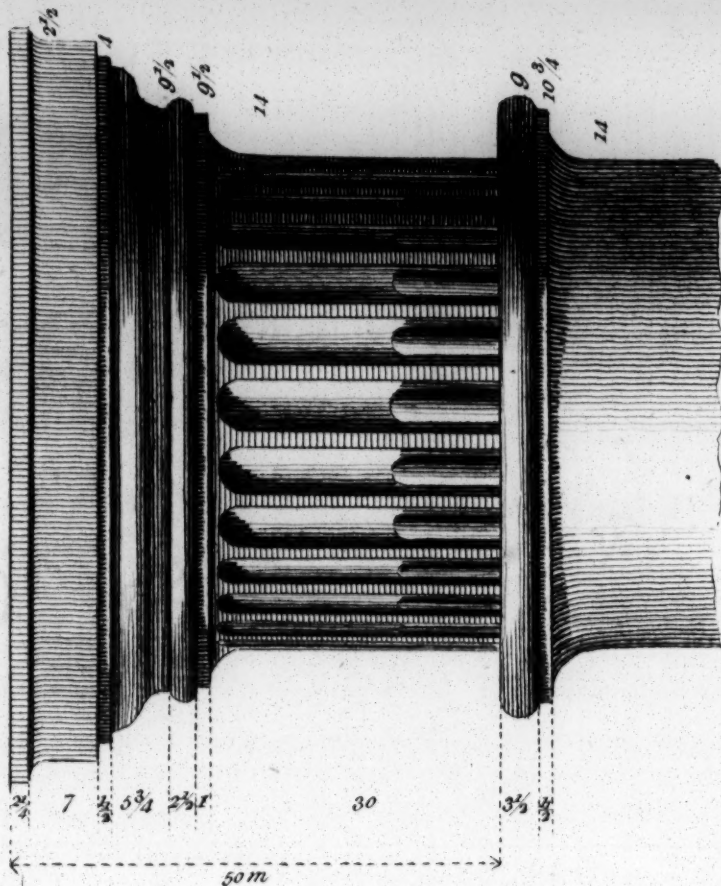
A Modern Ionic Capital, with Leaves



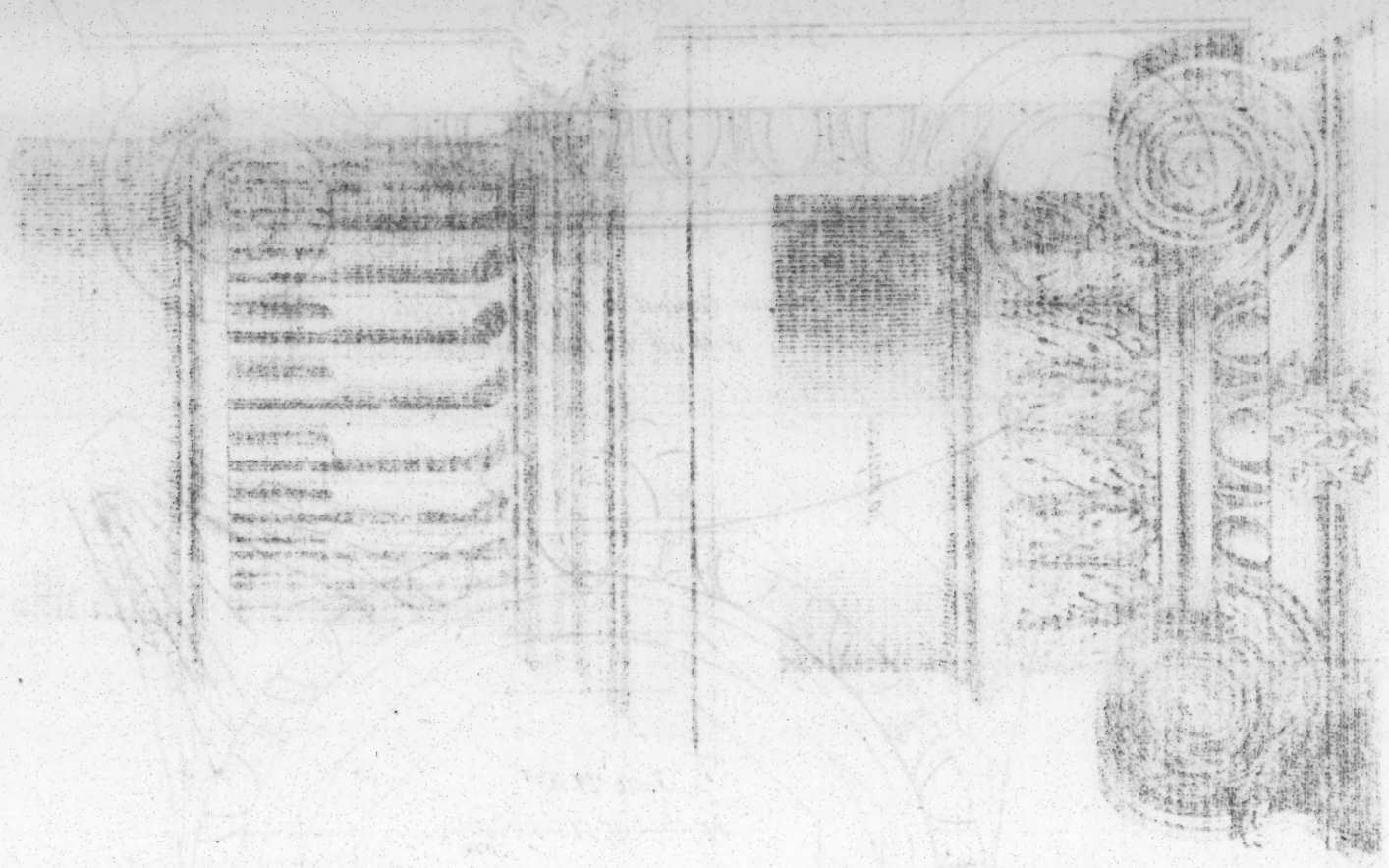
The Eye of the Volute at large.

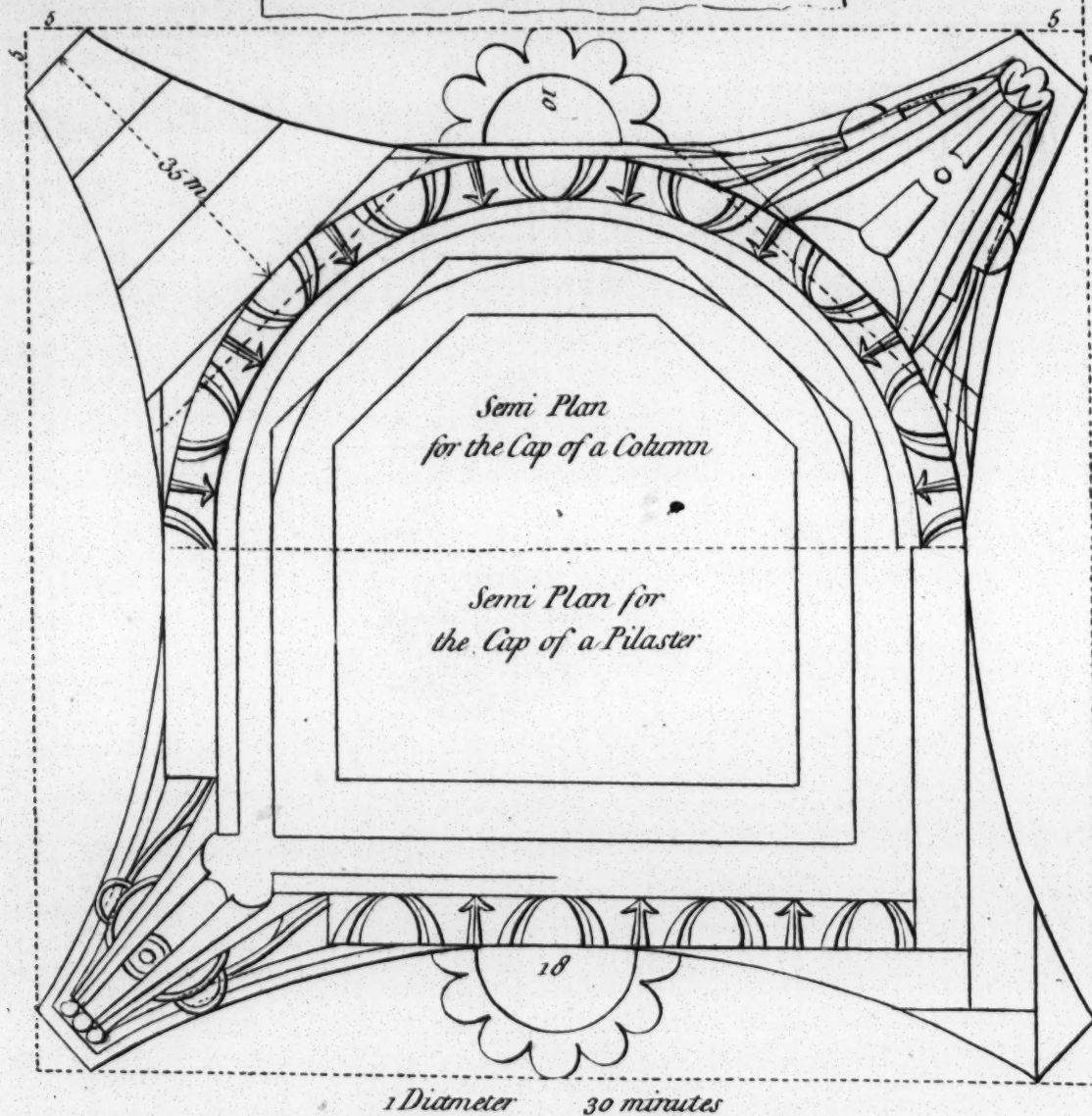
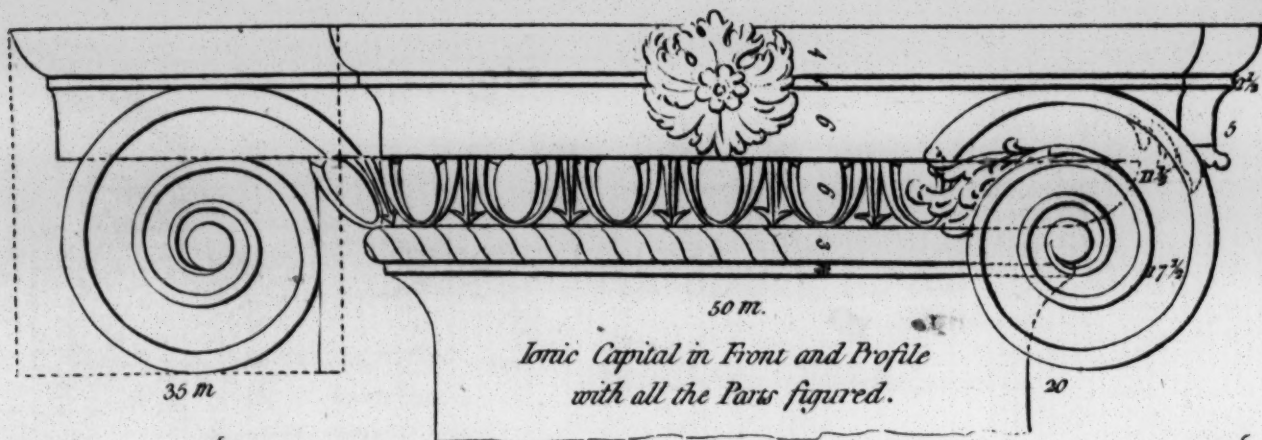


The Ionic Volute.

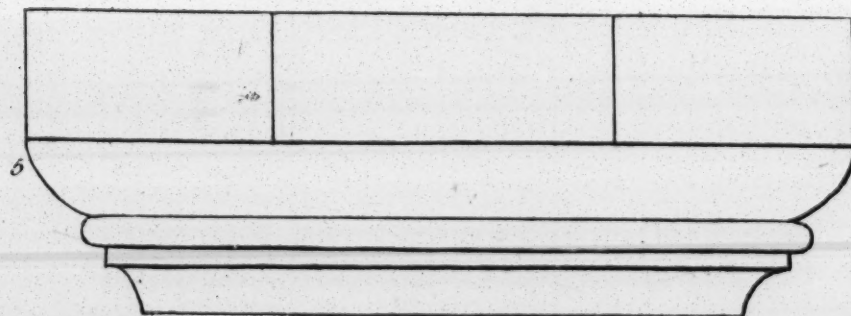


A Composed Cap for a Column.





*The Body of the Cap with
the Mouldings worked
before the Horns are
Glued on.*



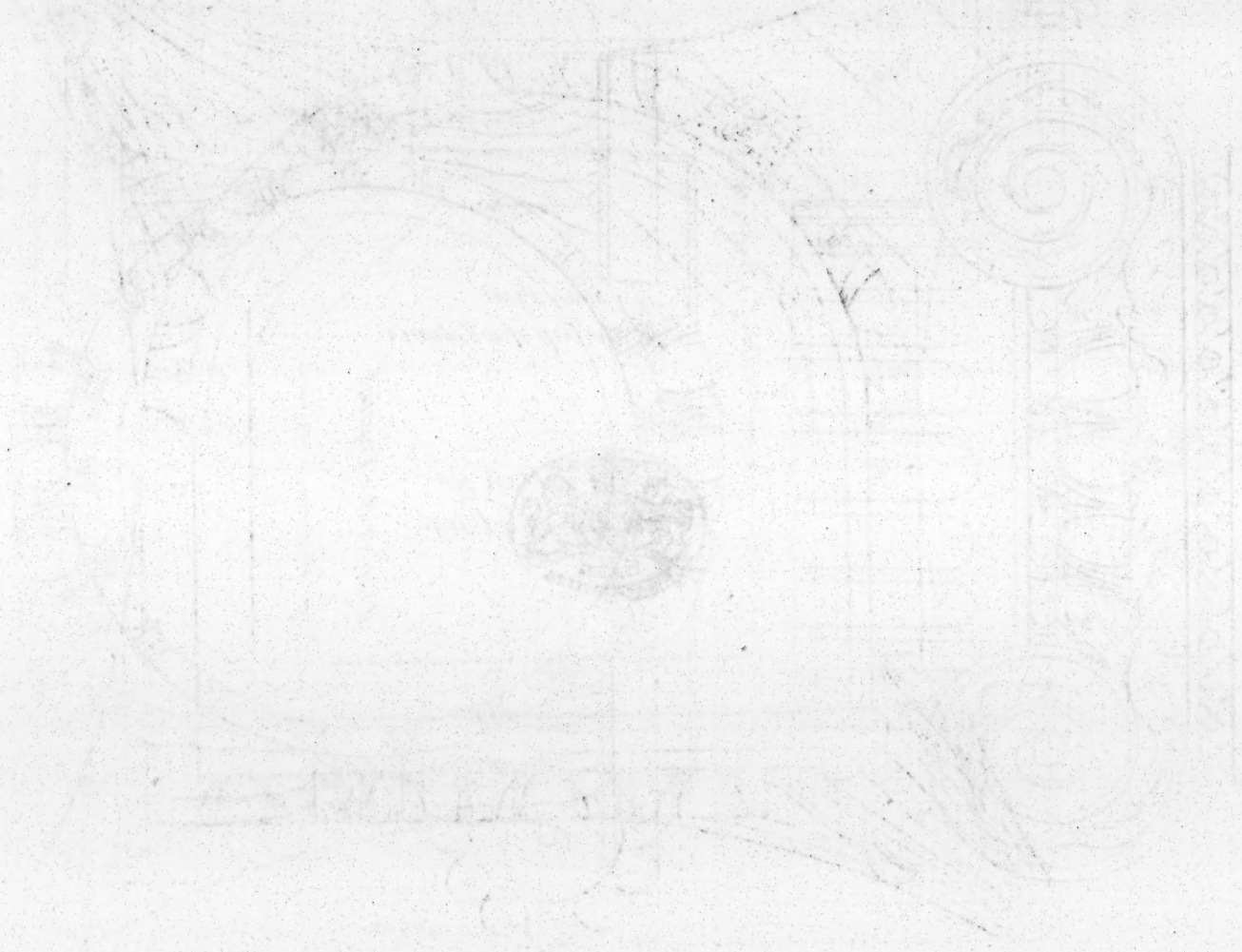
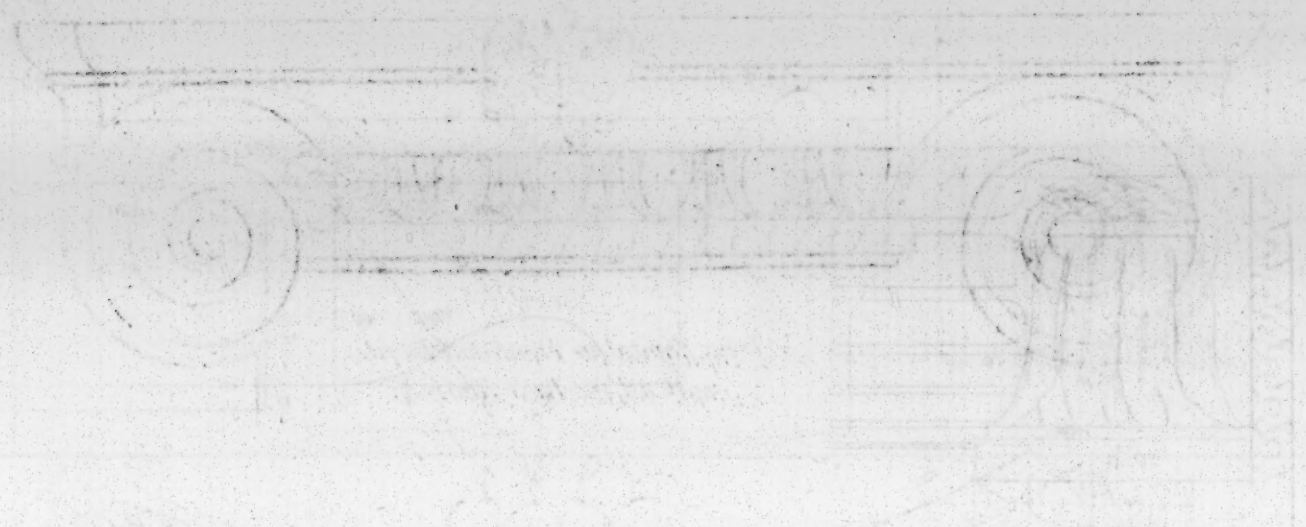
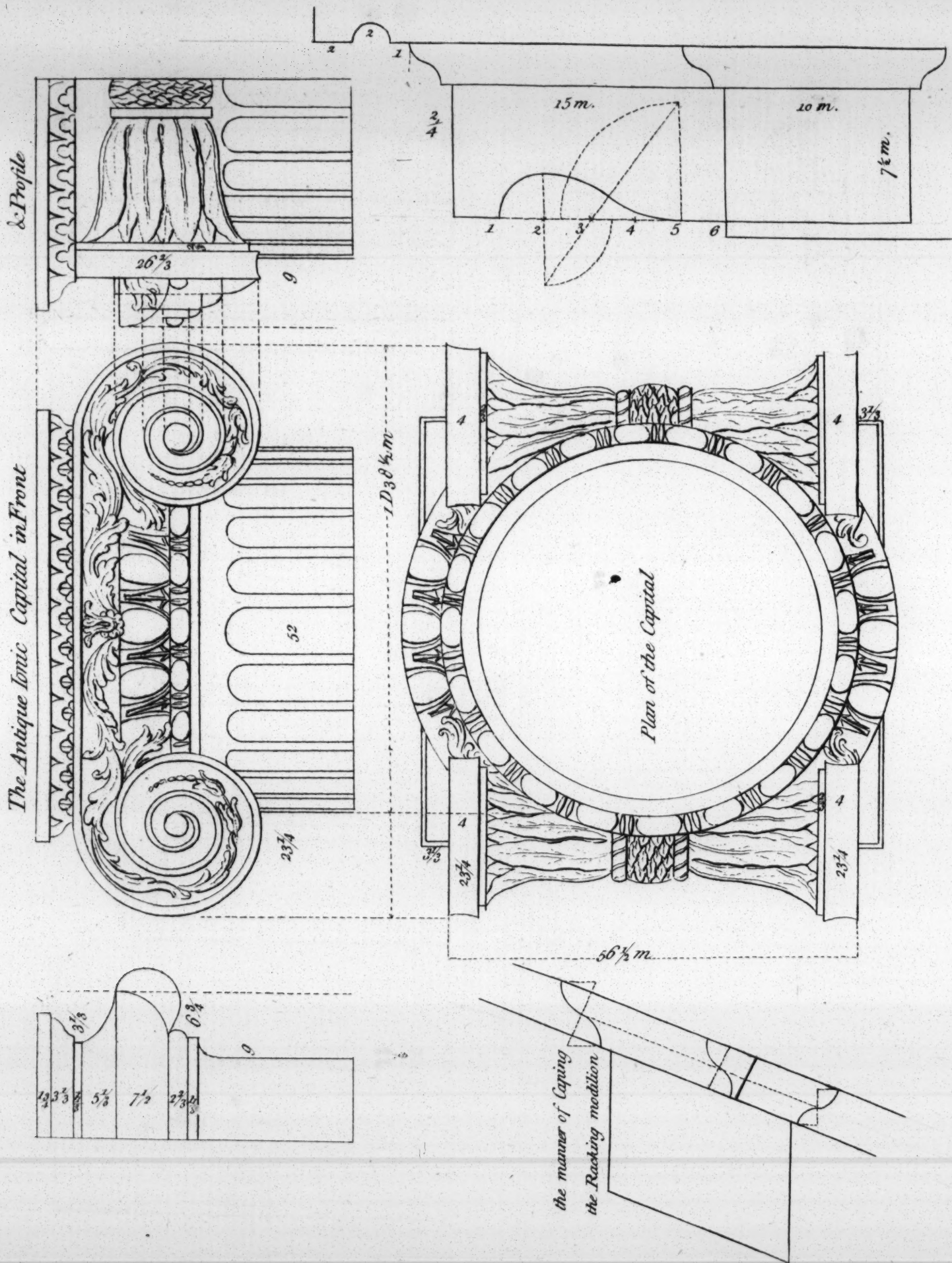
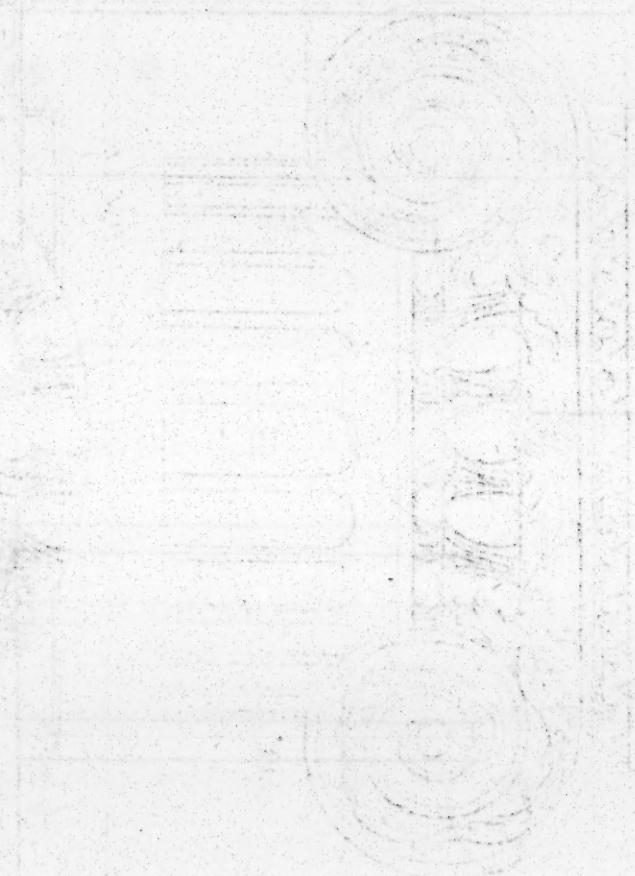
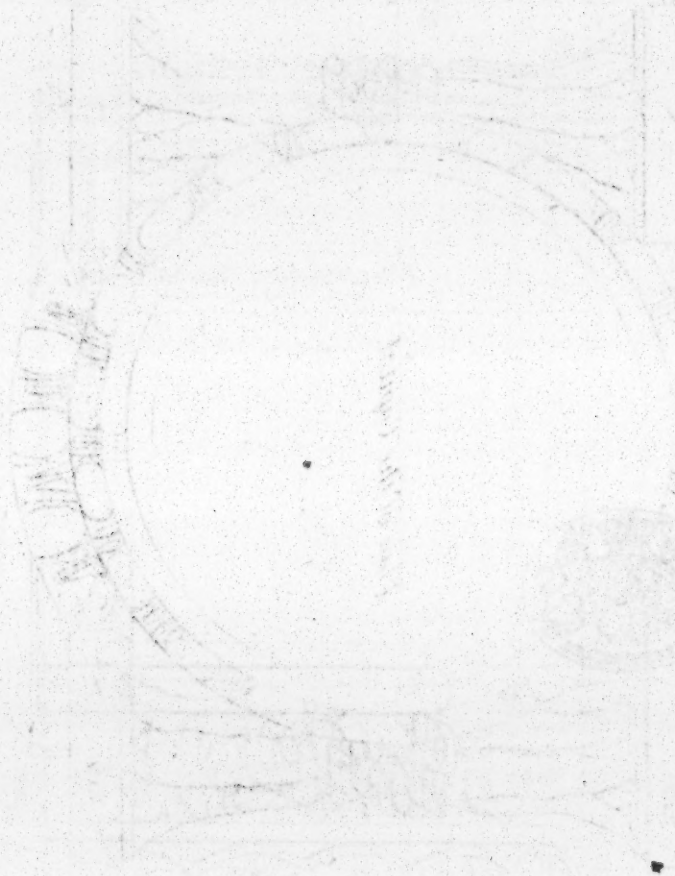
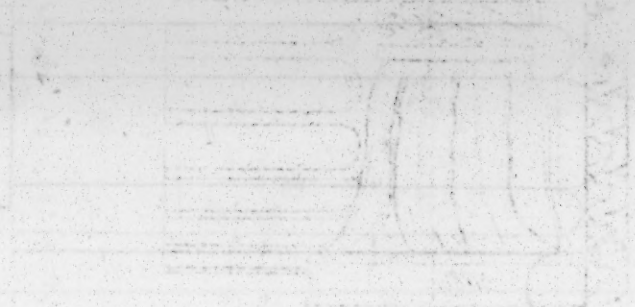
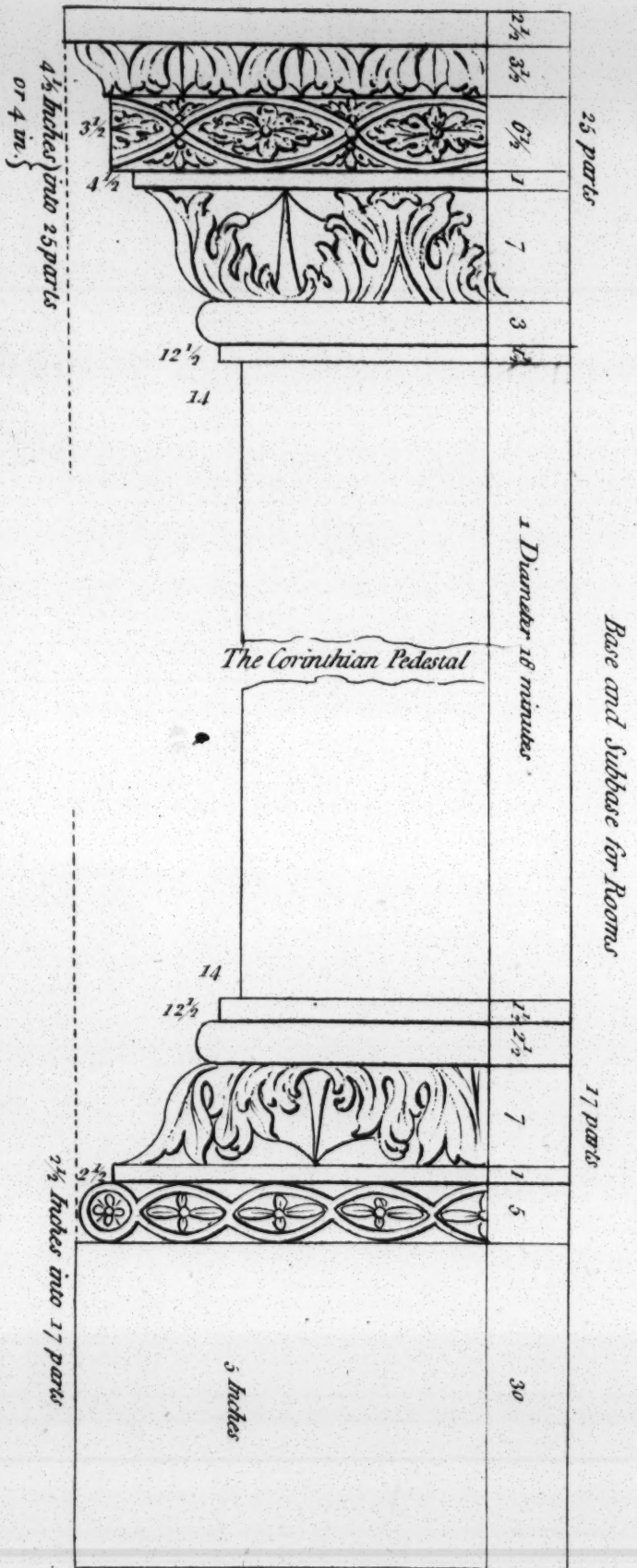
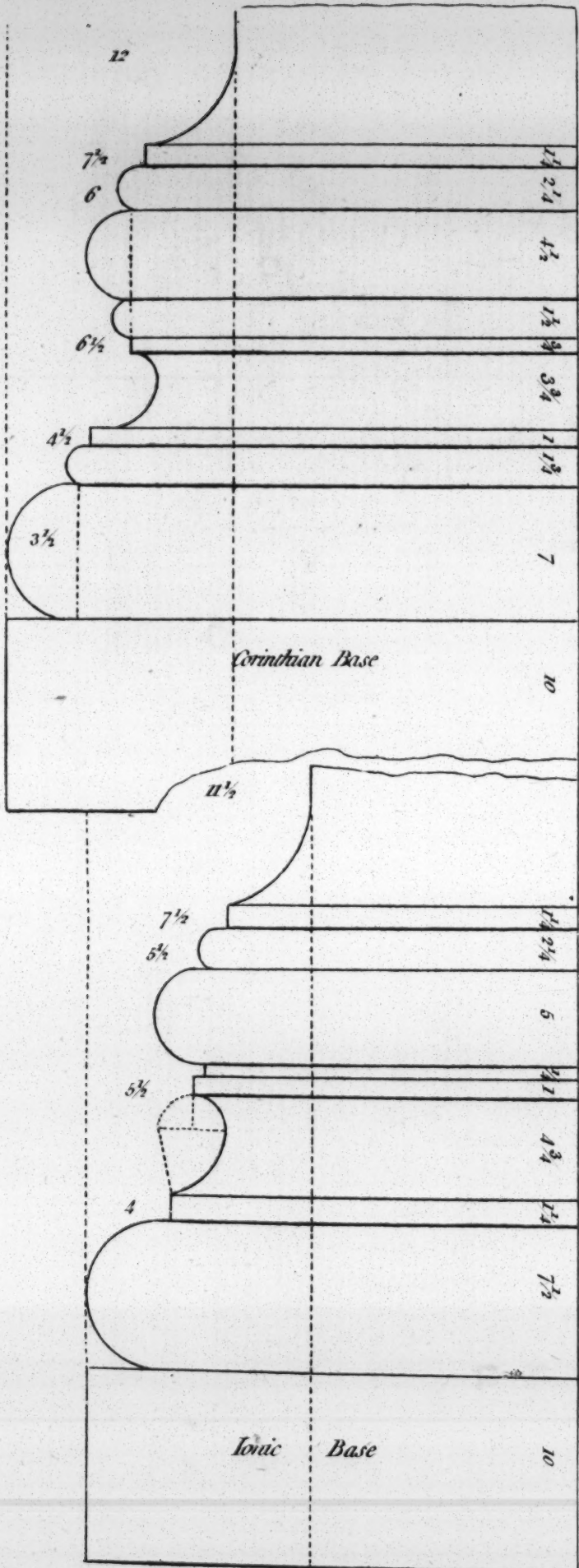


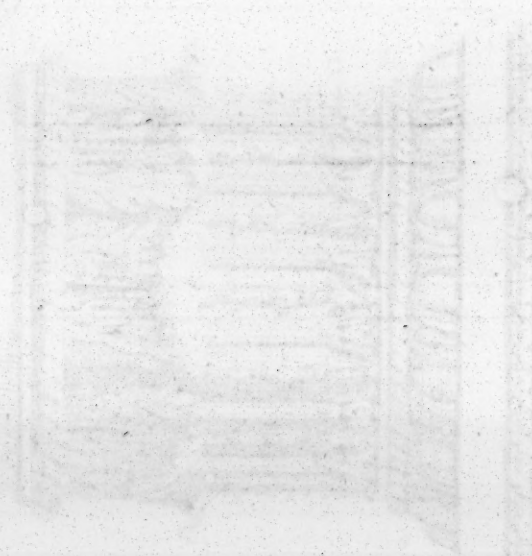
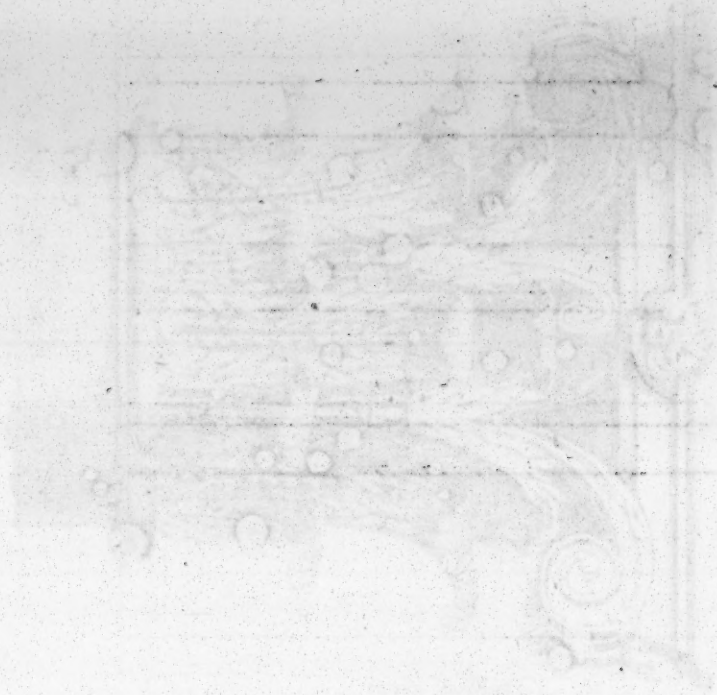
Fig. 1

Architectural drawing of a dome and archway

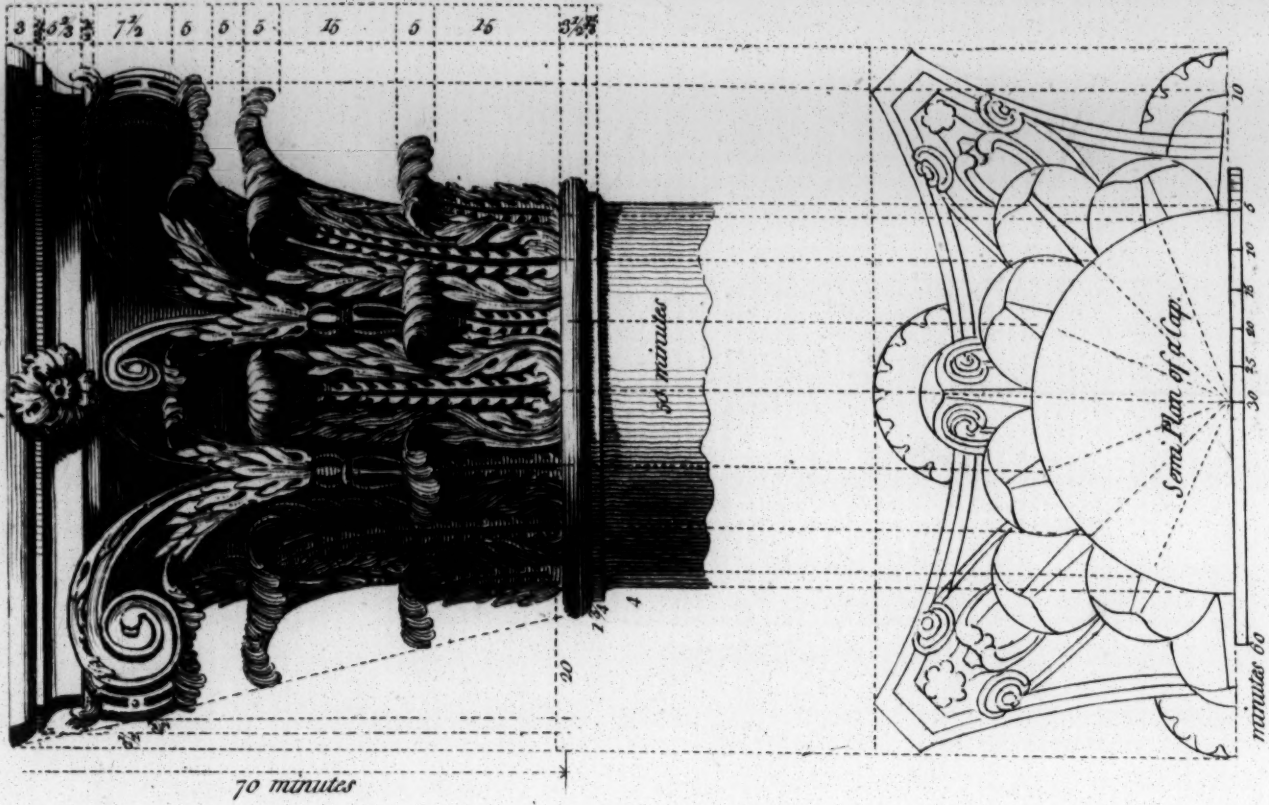




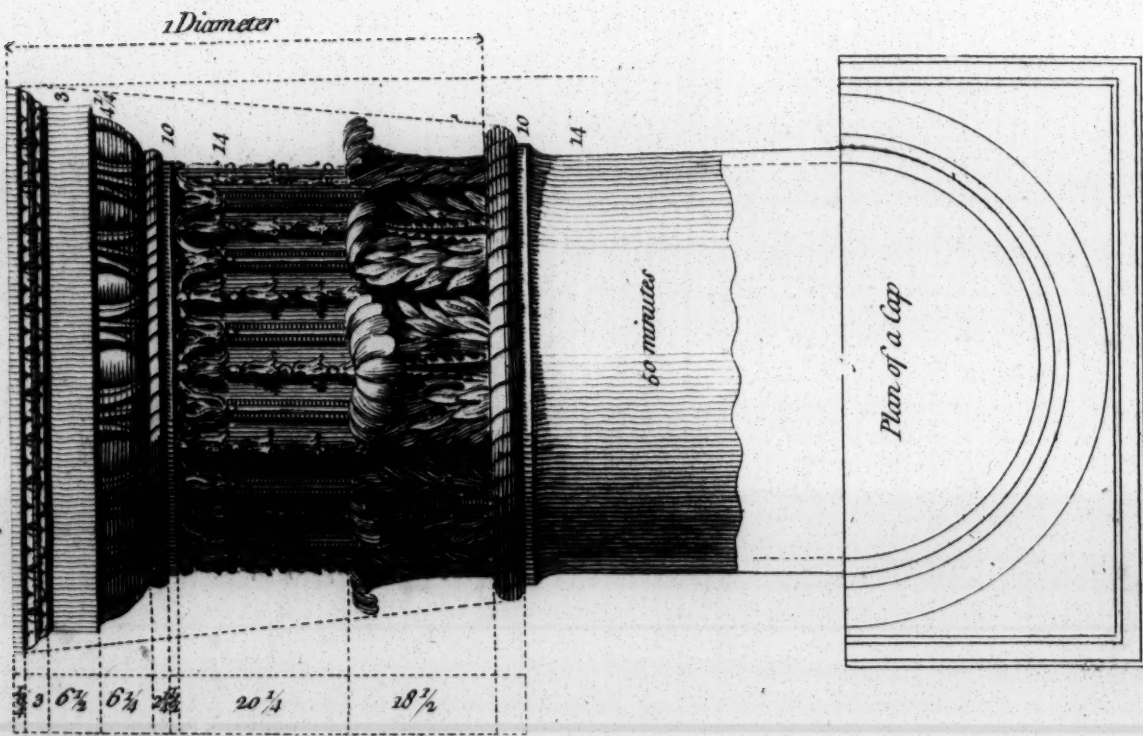




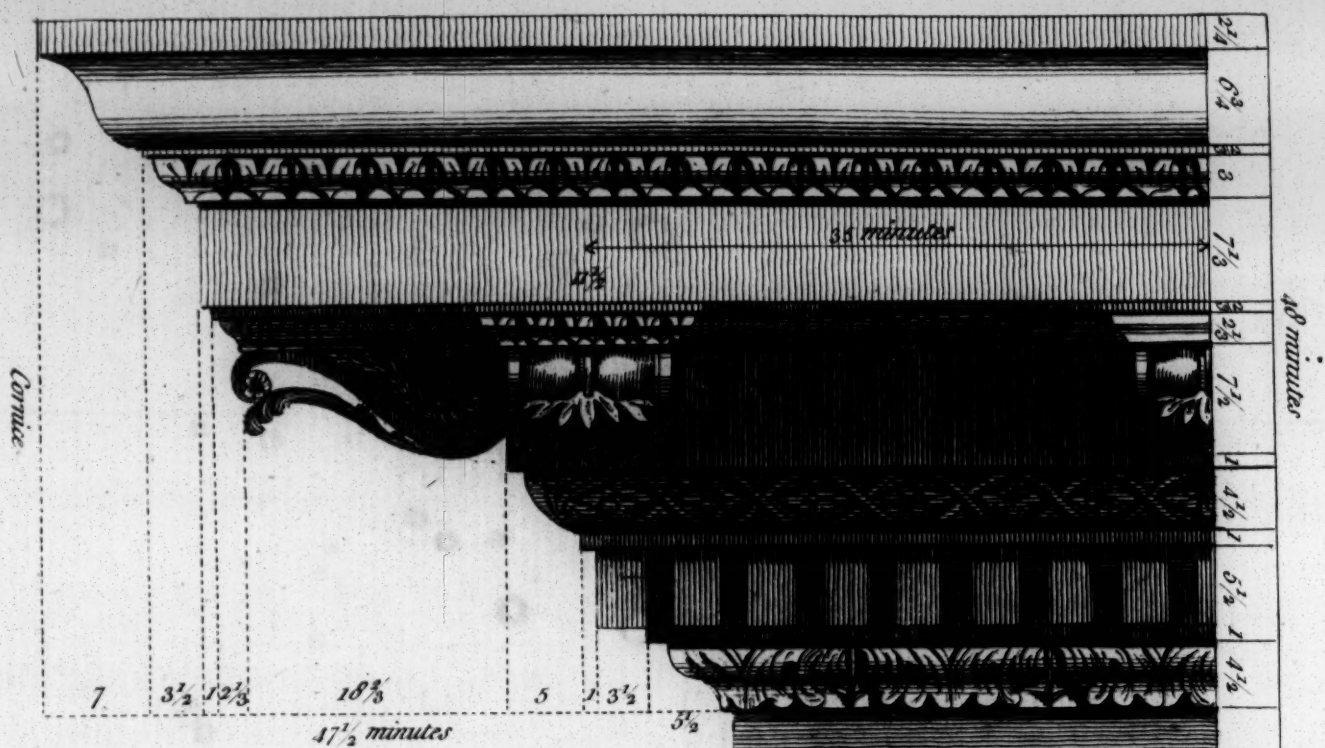
Corinthian Capital for a Column.



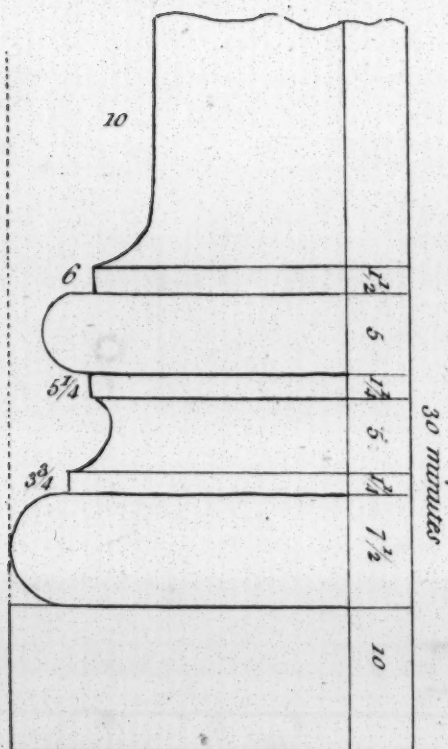
*A Modern
Composed Capital for a Column.*







The Corinthian Entablature.



Attic Base to Ditto.

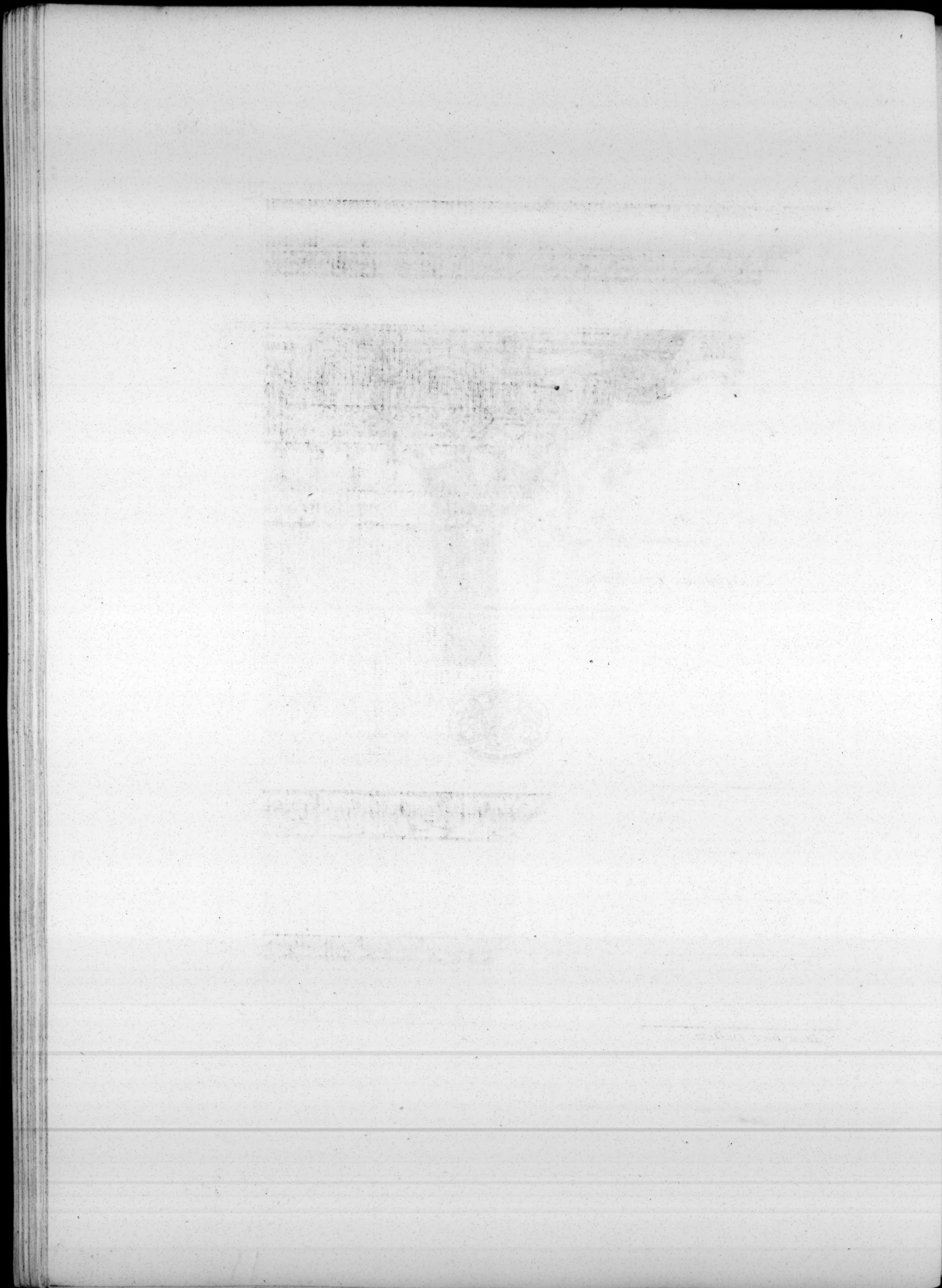
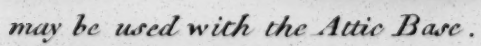


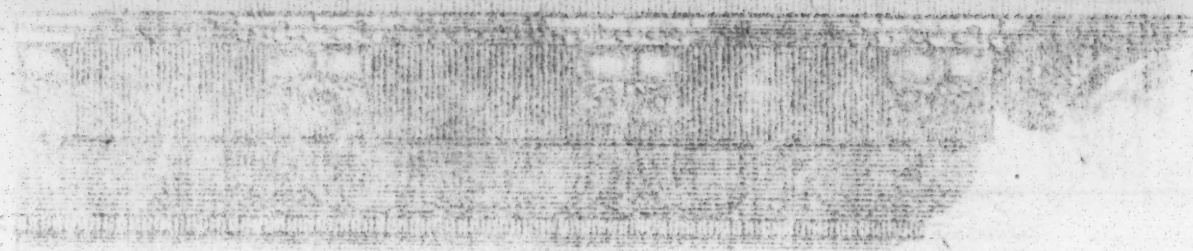


Plate XXV.

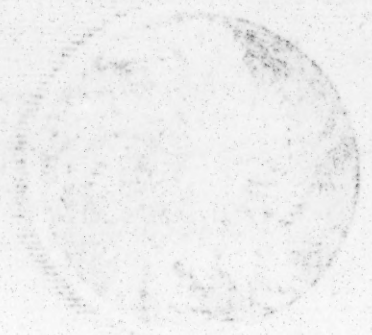


may be used with the Attic Base.

THE UNIVERSITY OF CHICAGO



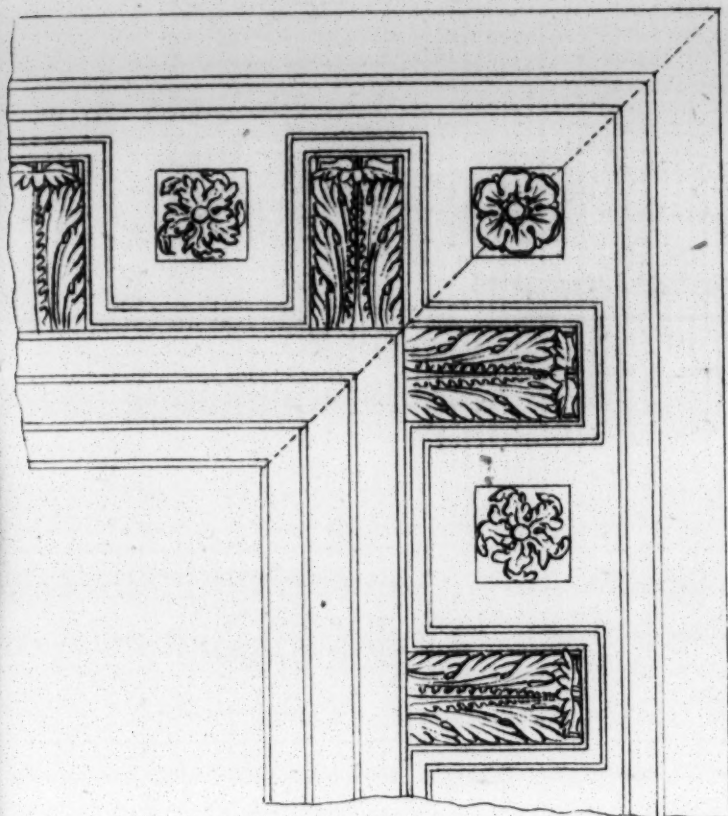
1911



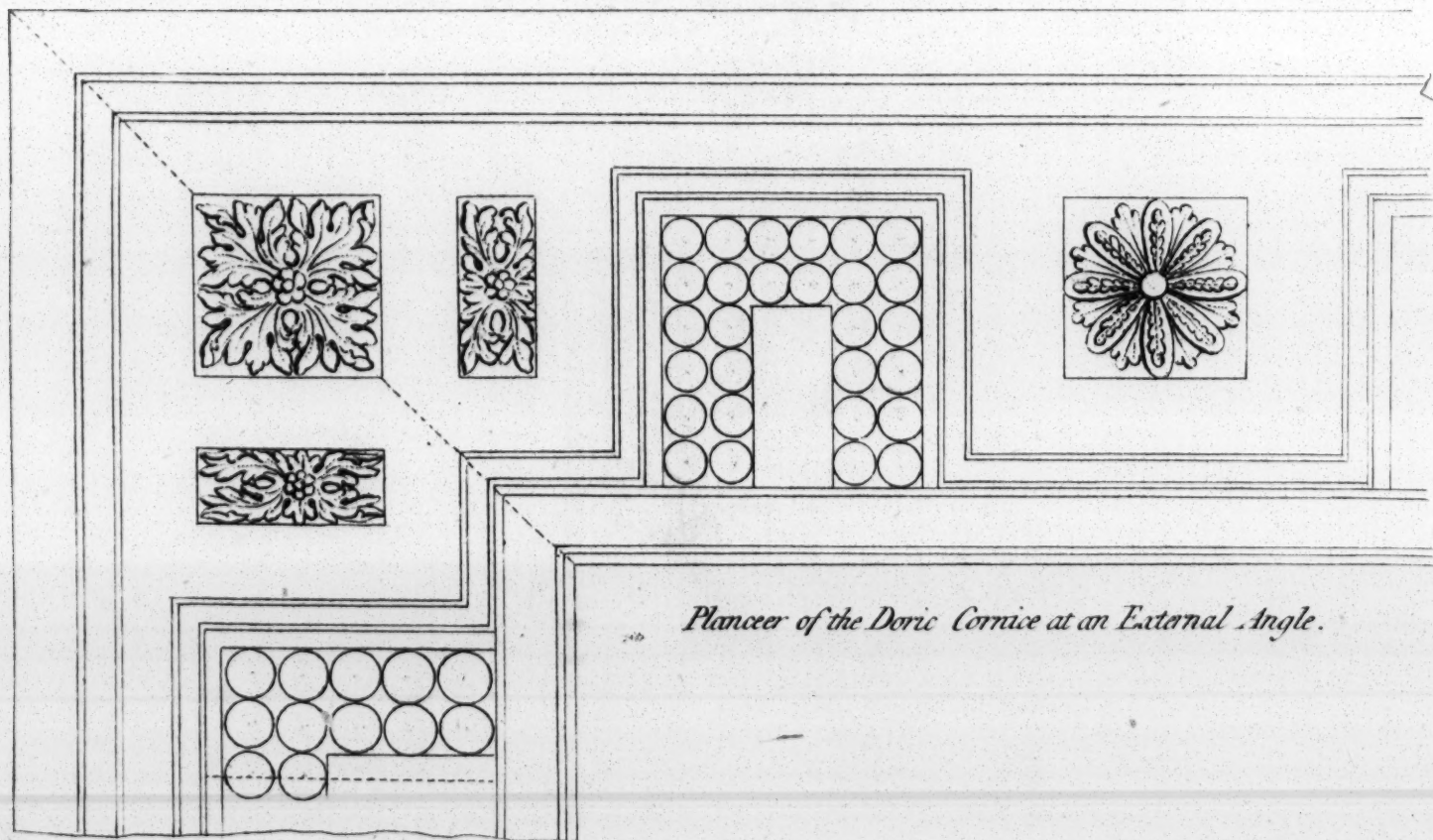
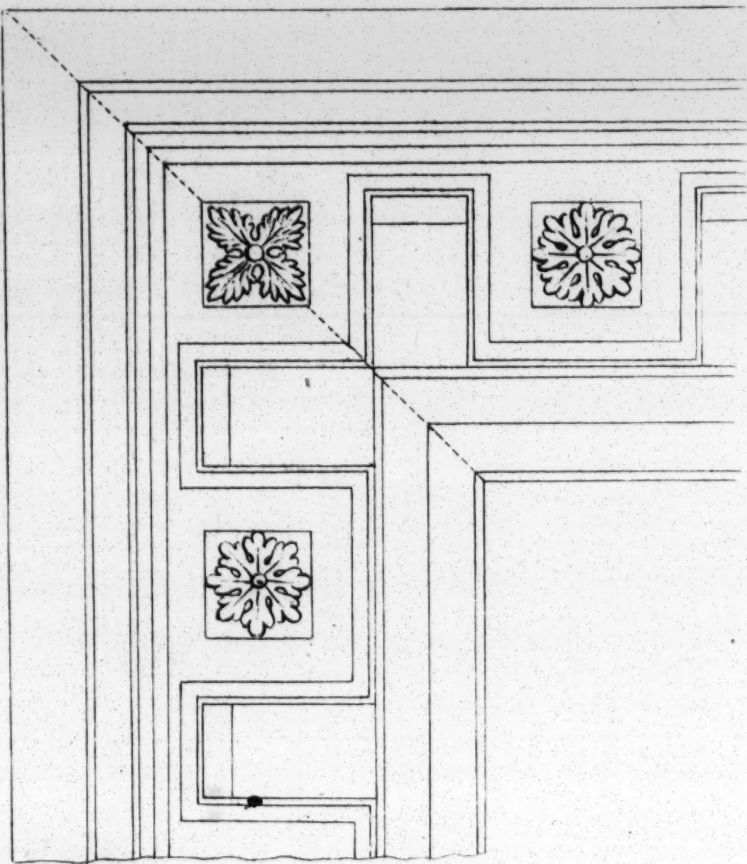
LIBRARY

OF THE UNIVERSITY OF CHICAGO

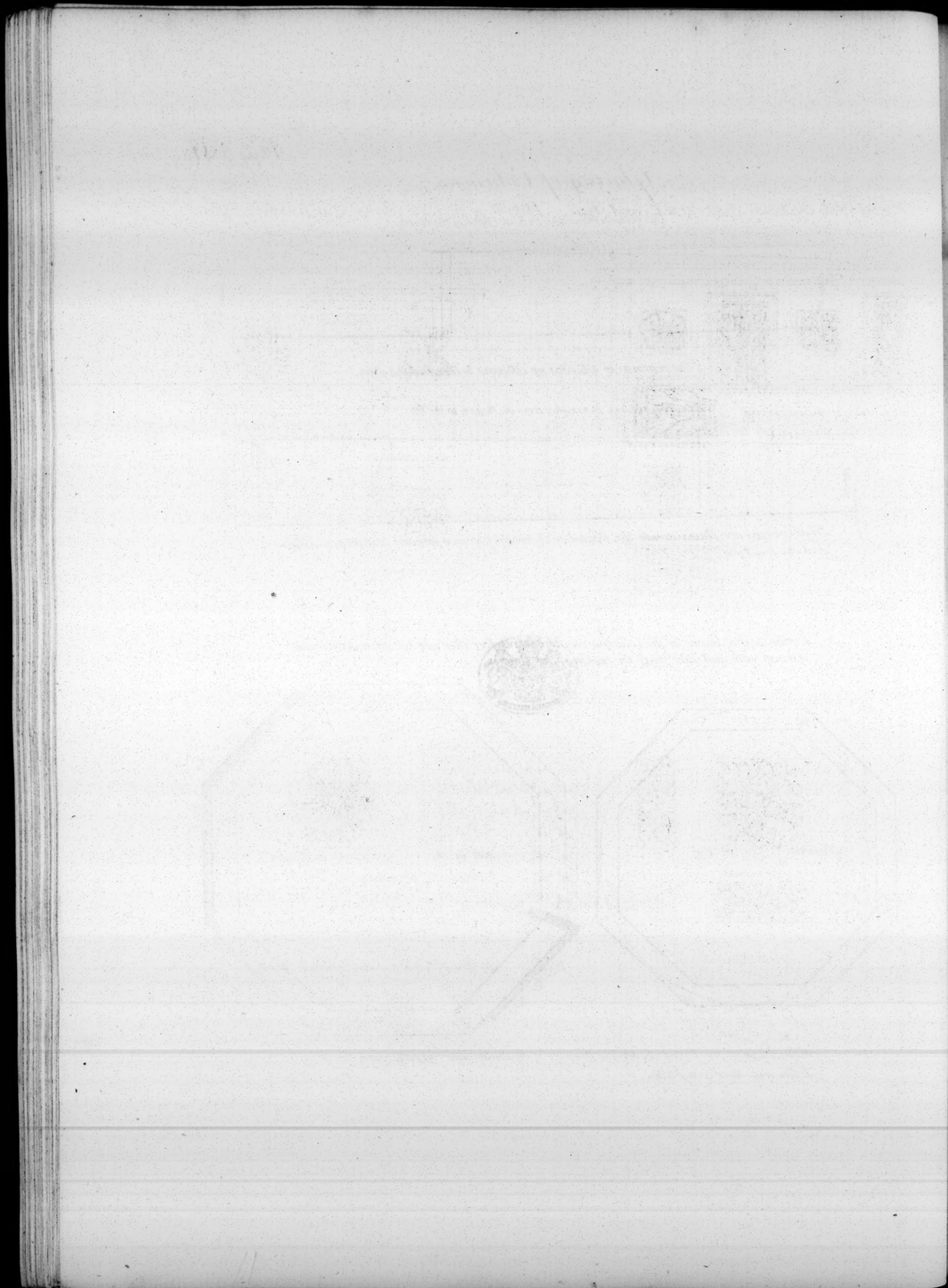
Planceer of the Corinthian Cornice at an External Angle.



Planceer of the Ionic Cornice at an External Angle.

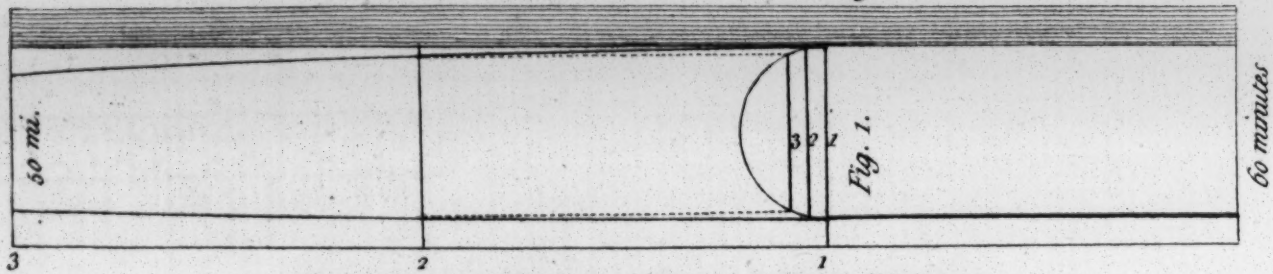


Planceer of the Doric Cornice at an External Angle.



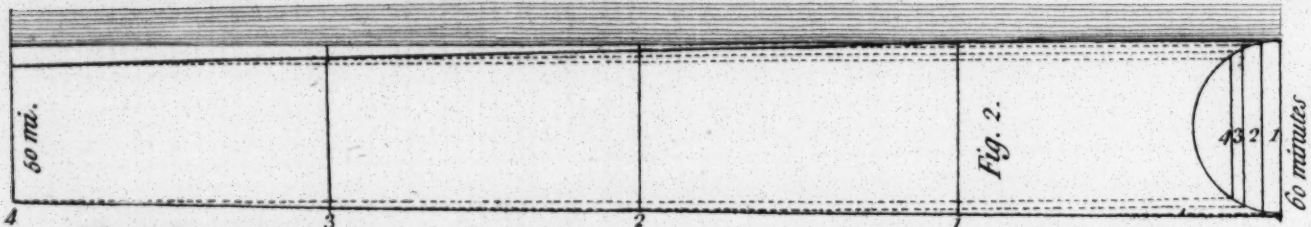
Glueing of Columns.

This Column Diminishes from one third of the Height.



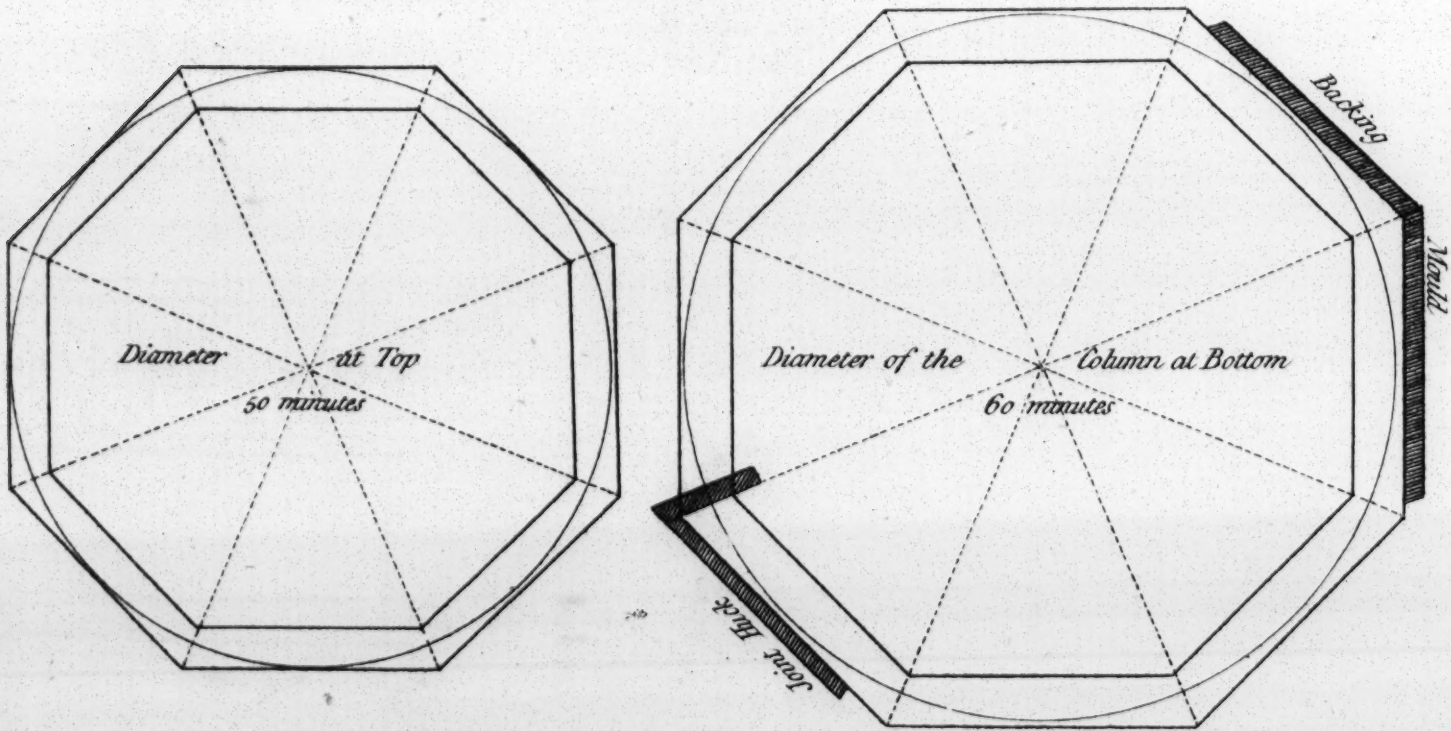
The manner of Glueing up Columns & Diminishing them

This Column Diminishes from the Bottom to the Top

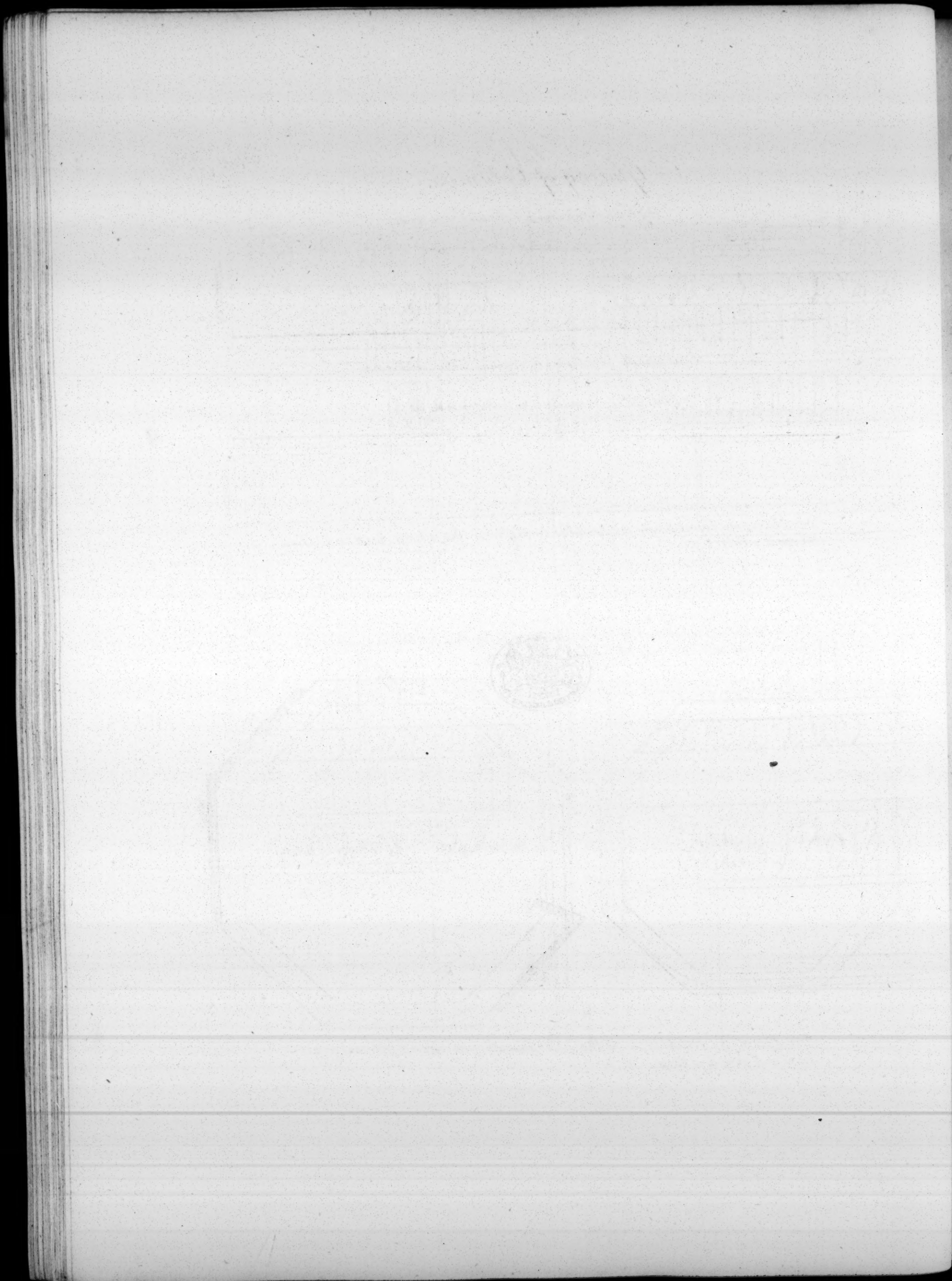


When Columns are fluted divide the Round or Circumference into 96 parts give three to a Flute and one to a Fillet.

Diminish the Staves of the Columns on the Faces before they are Glued together, this is a very safe and sure way for making the Column.

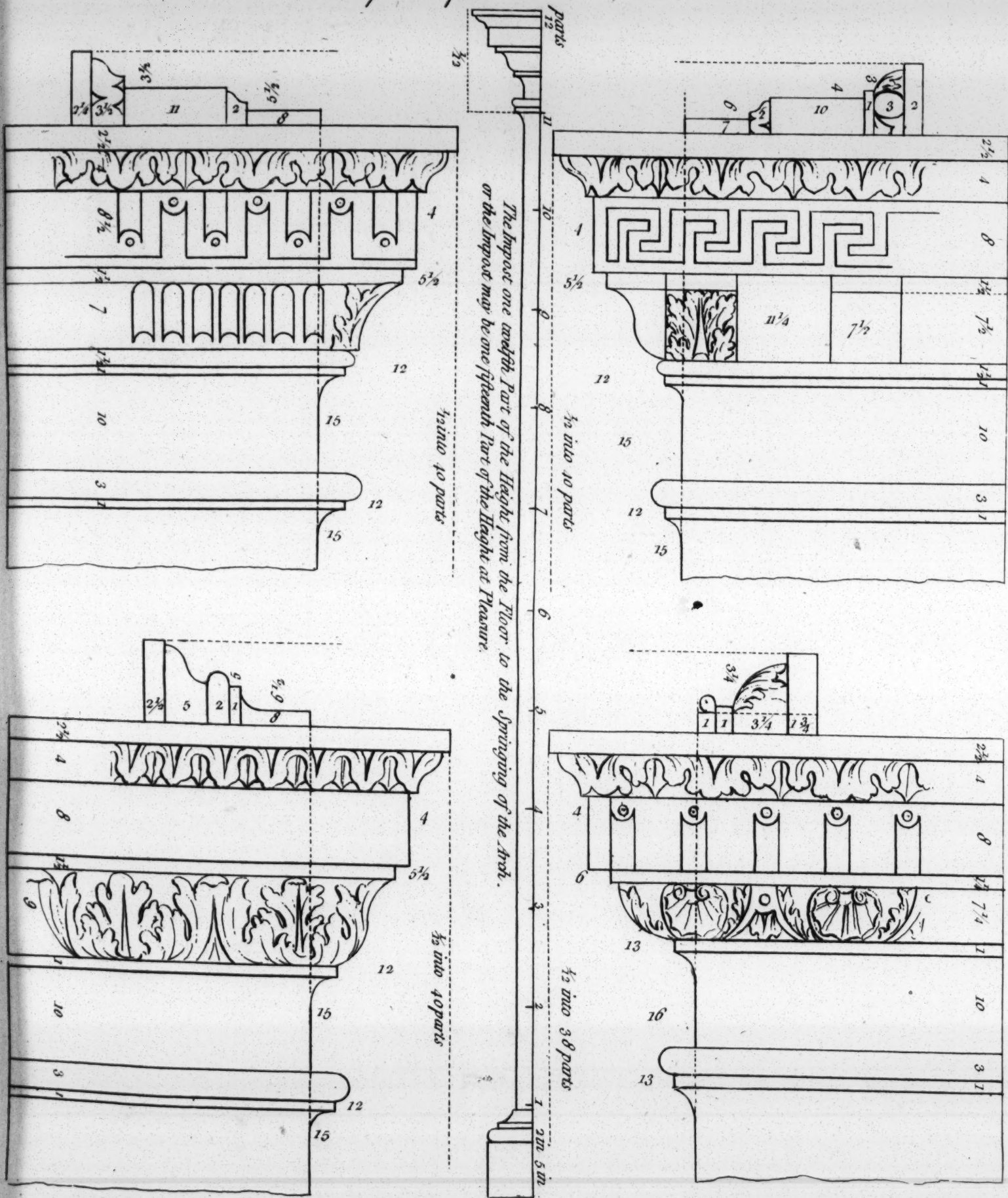


When Pilasters are Fluted divide the Breadth or Diameter into 29 parts give one to a Fillet and three to a Flute.



Imposts for Arches &c.

Plate XXVIII.



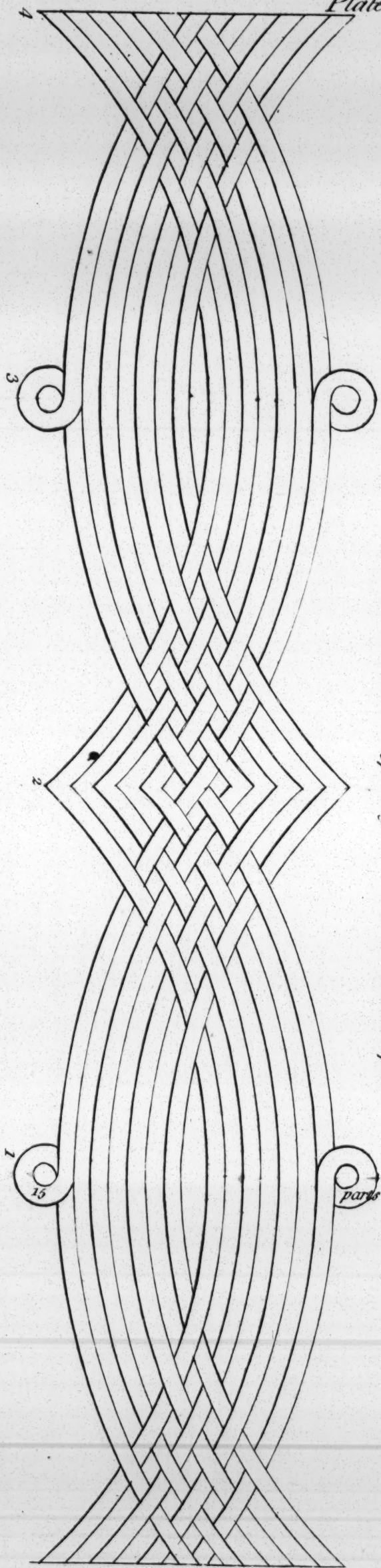
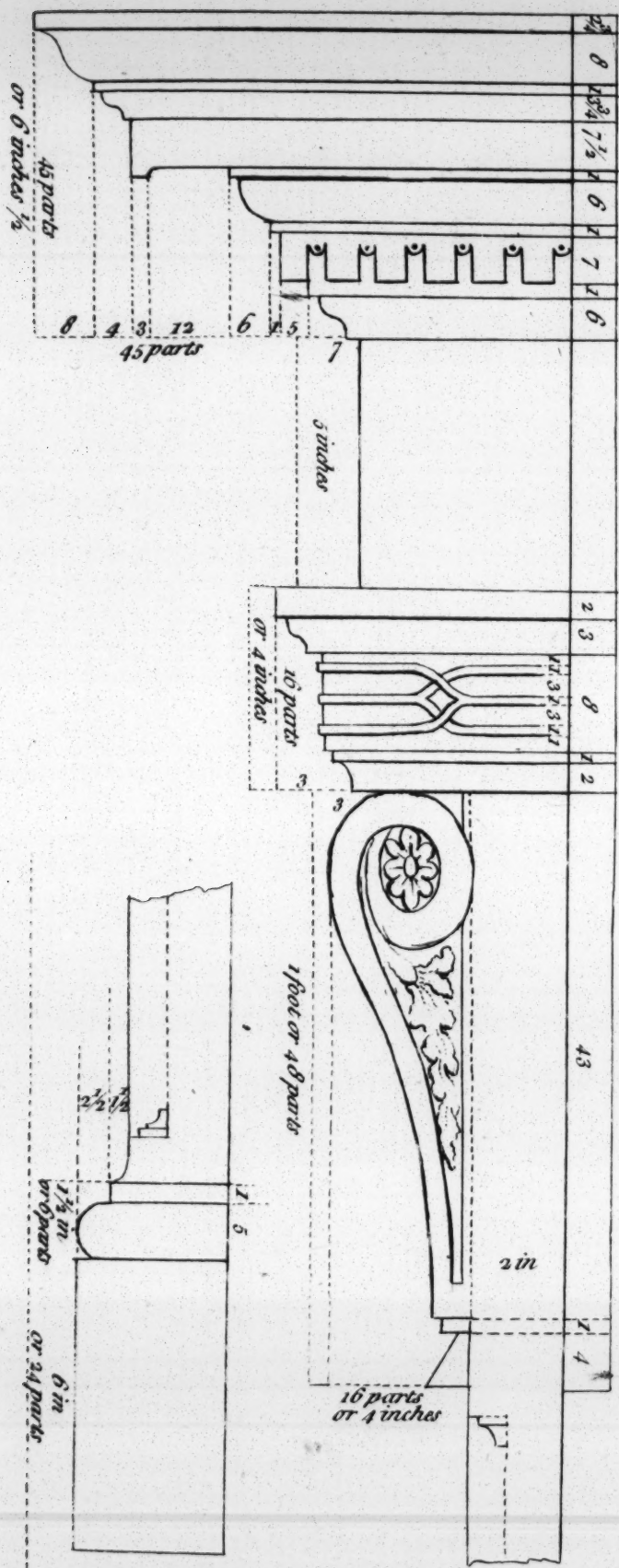
Exhibition of the
National Academy of Design

1864

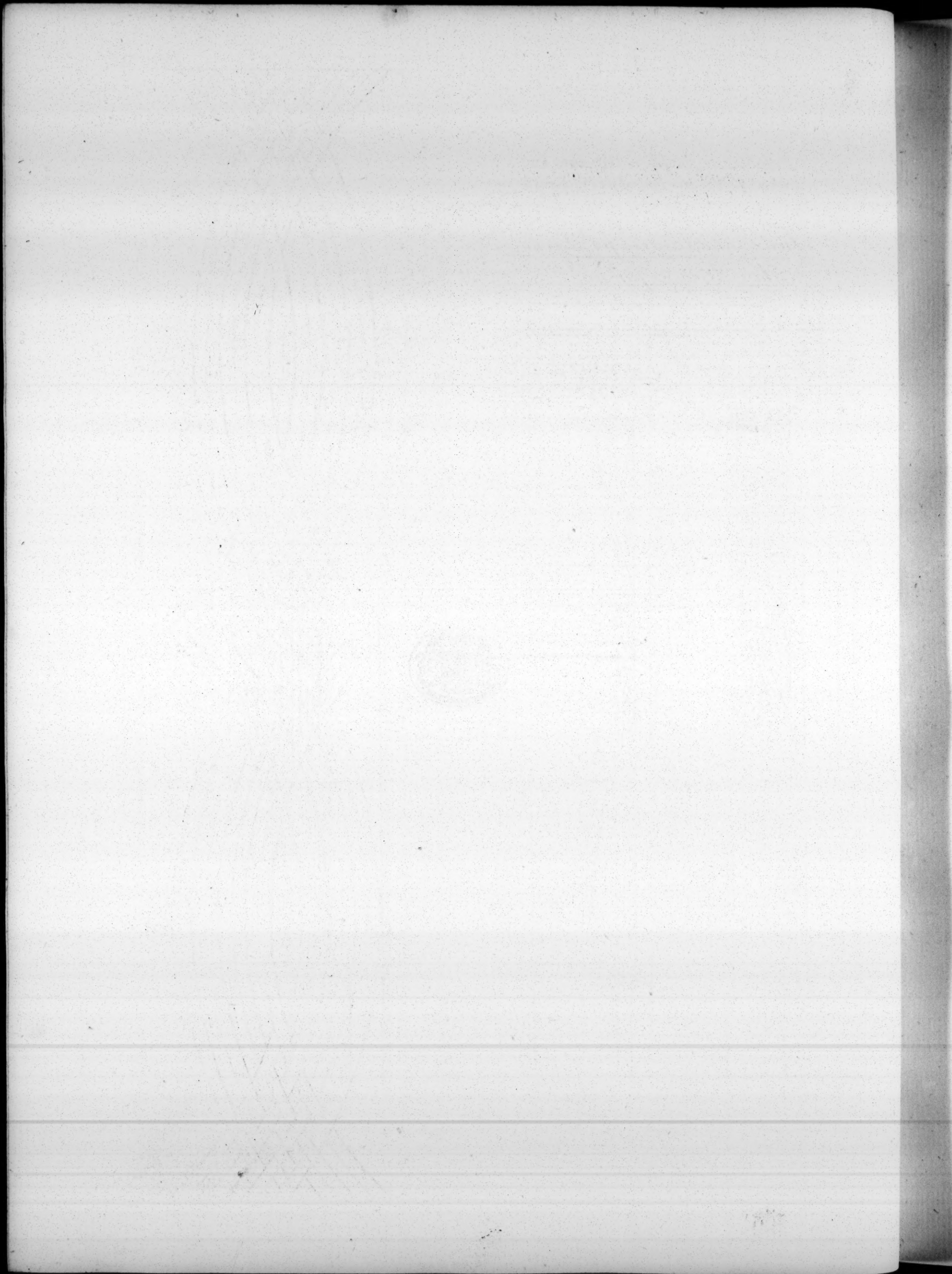
1864



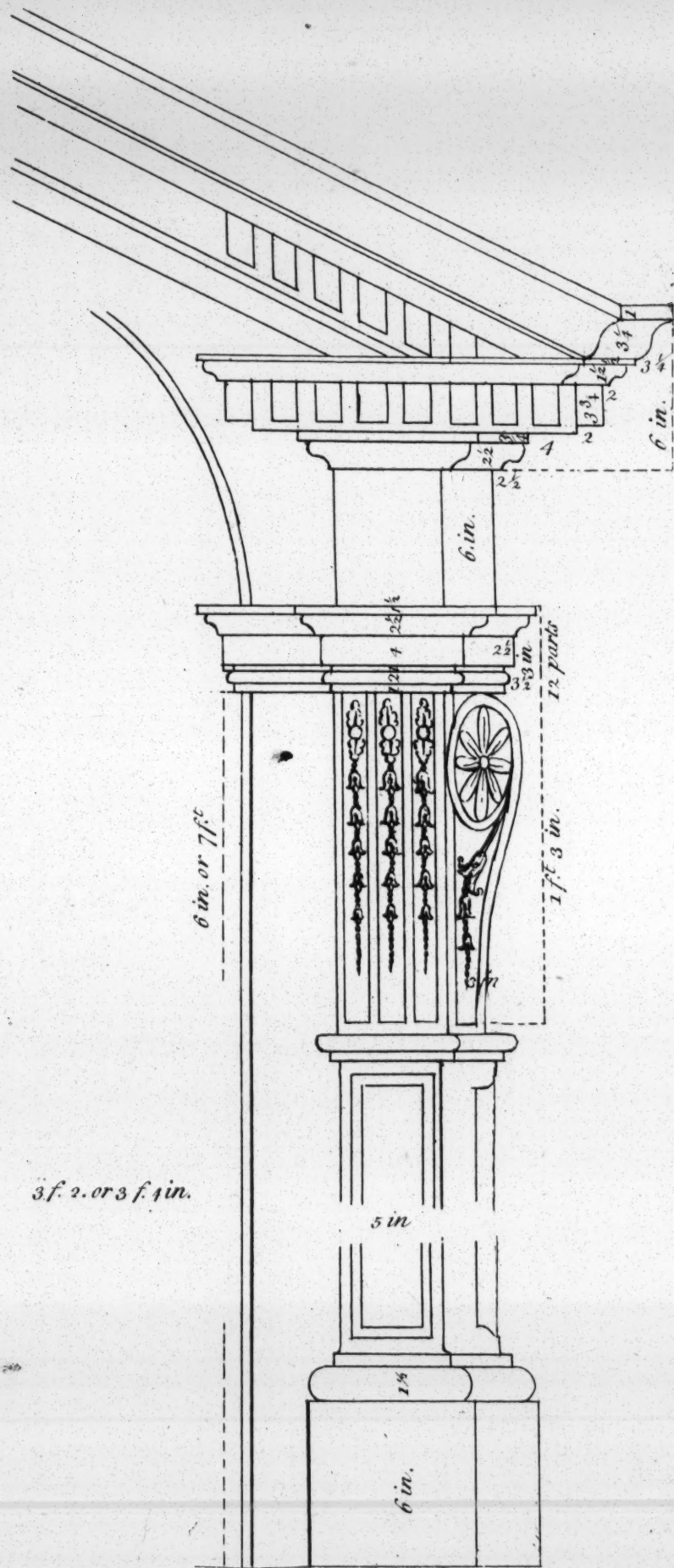
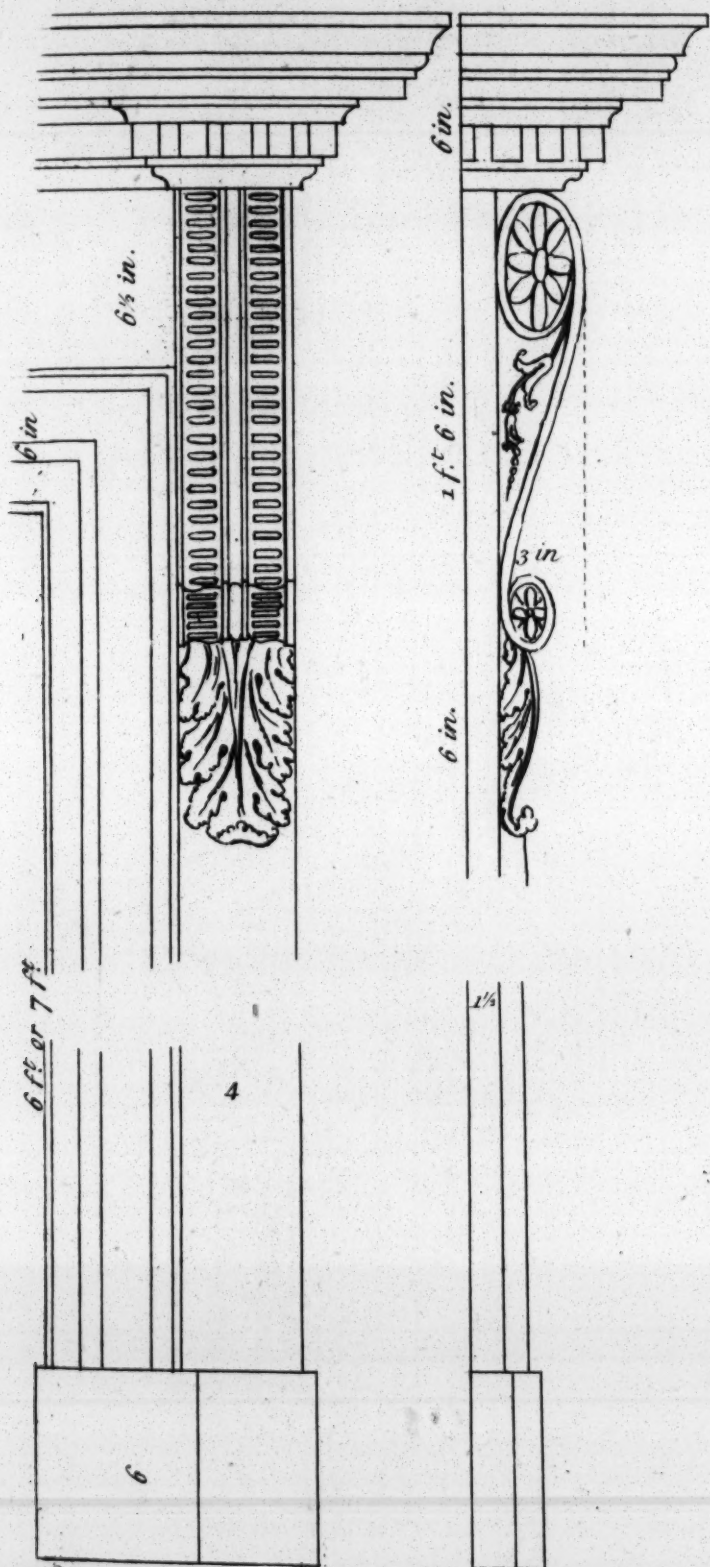
*Entablature for Doors Windows &c.
with all the Measures figured for Practice at large.*



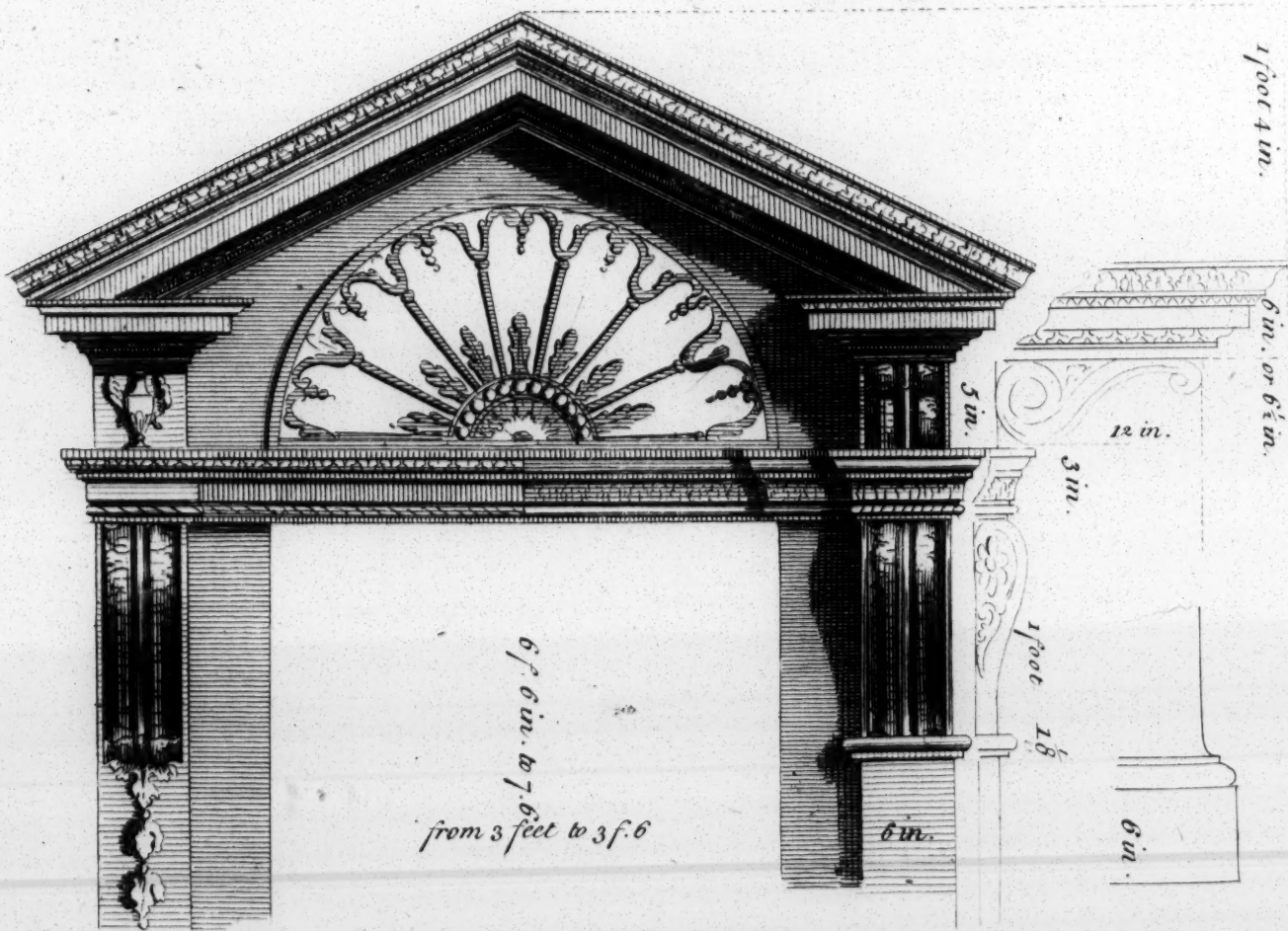
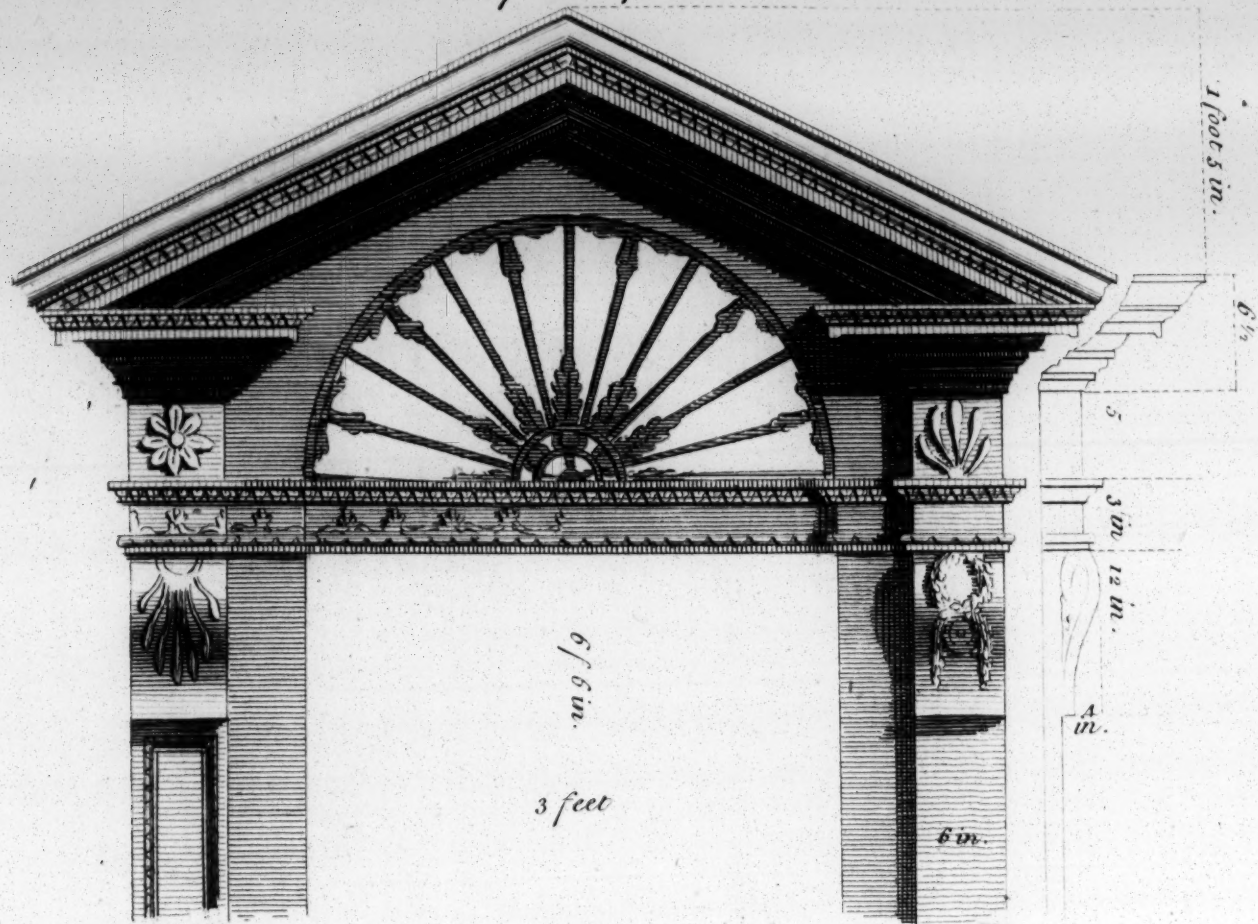
*Guidelines for the Raking Flutes of a Pediment &c.
Divide the Width into 15 parts, give one to a Rib & one to a Space.*

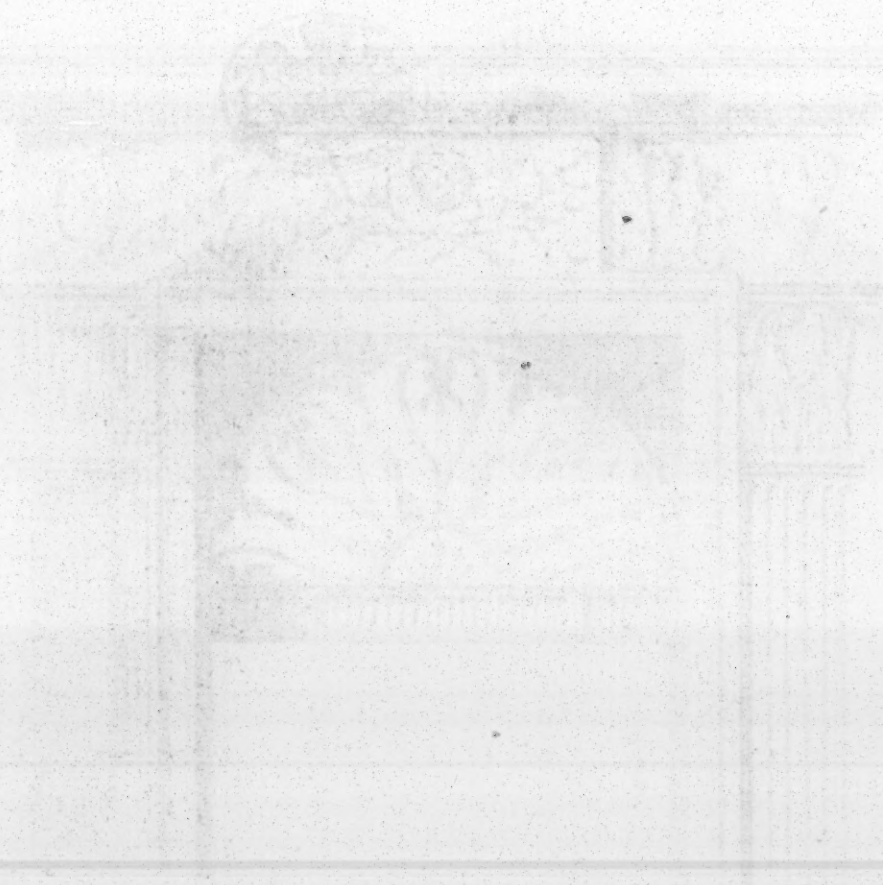
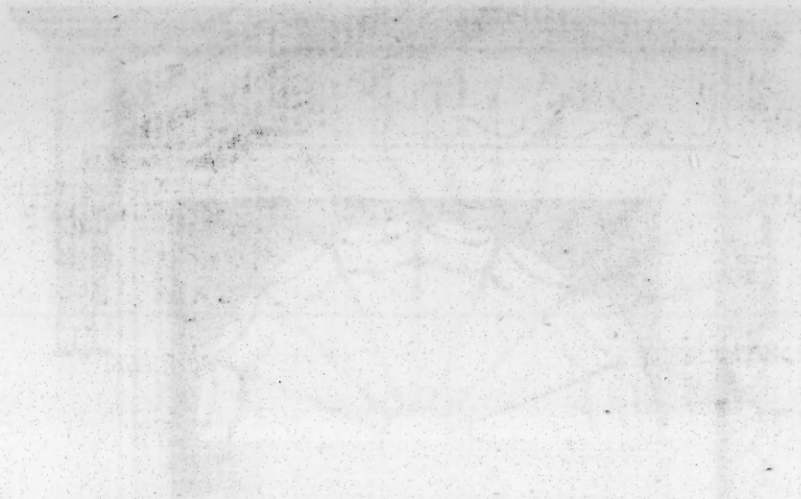


Two Entablatures for Doors,
the Measures figured.

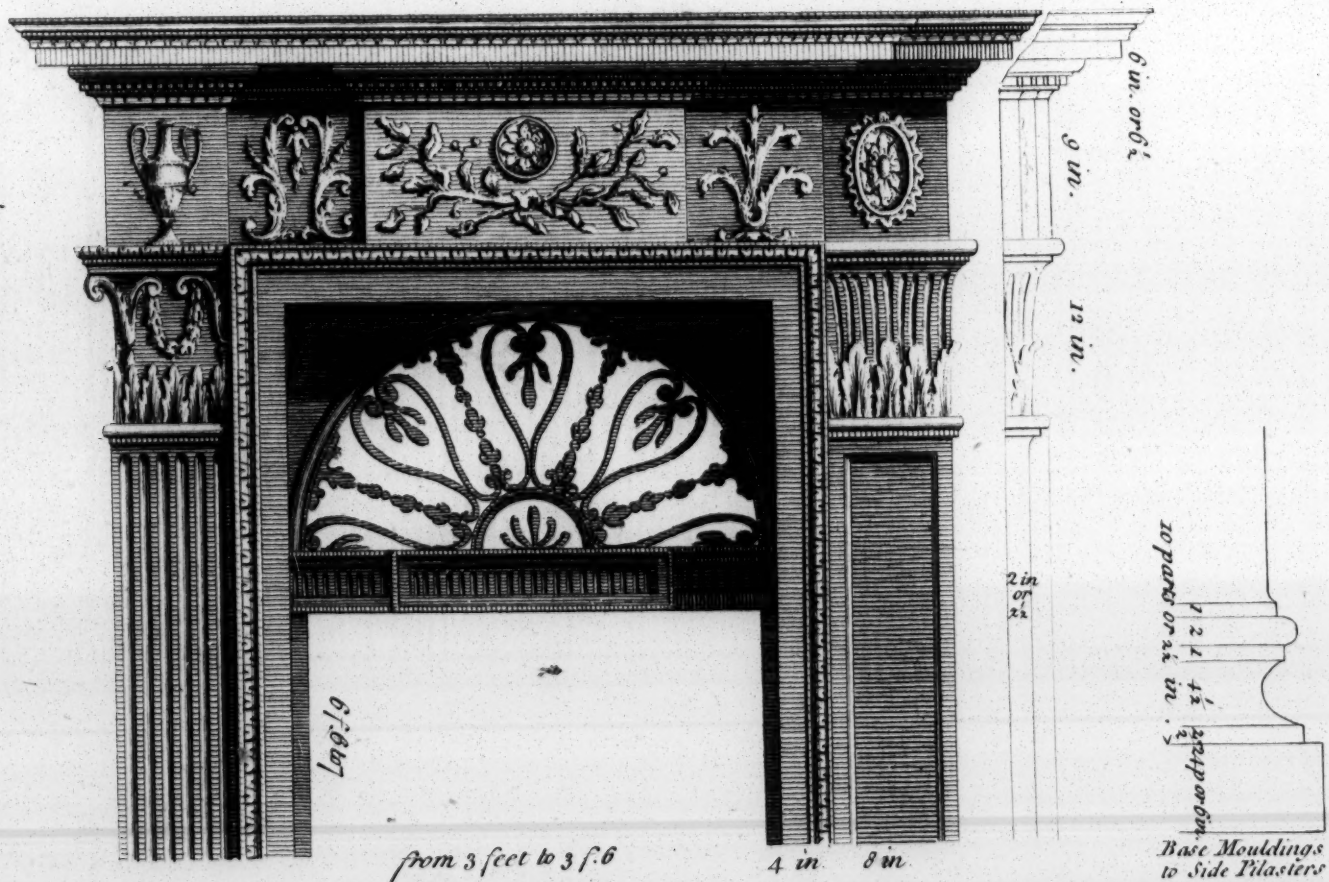
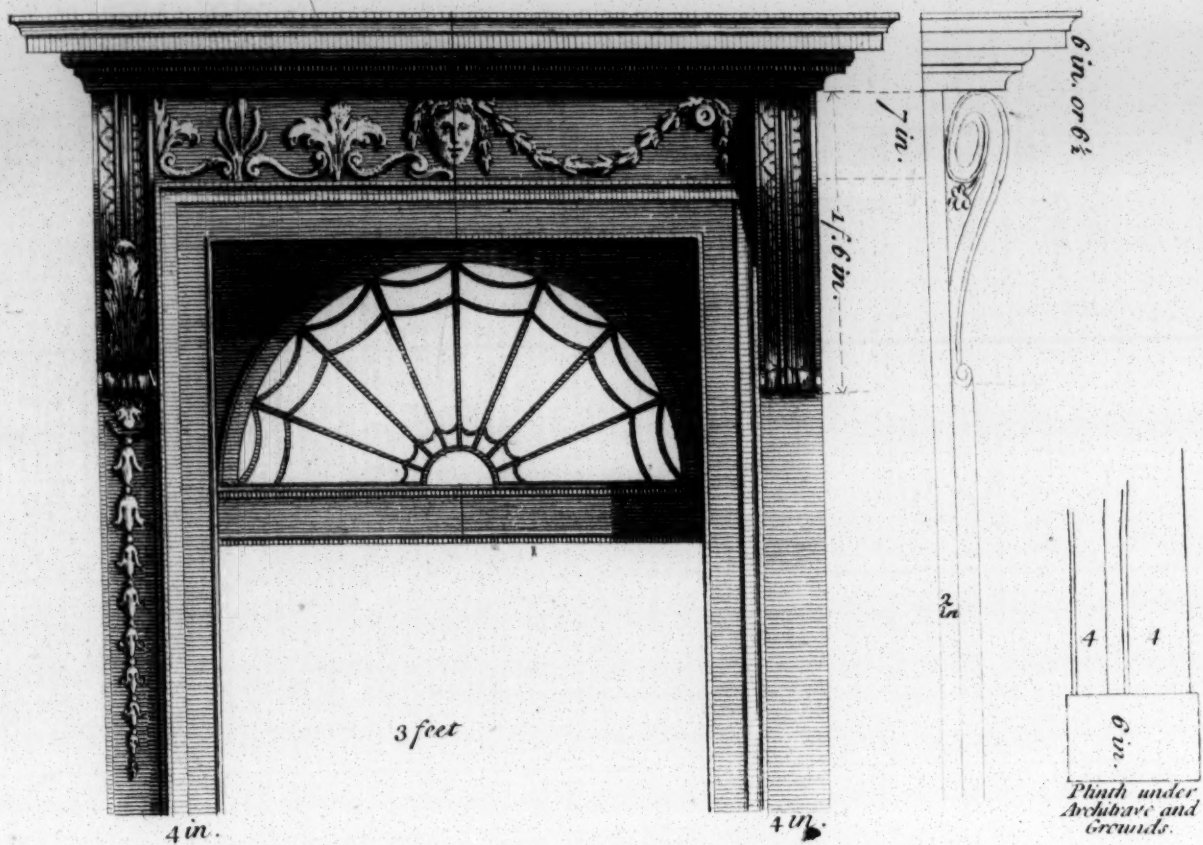


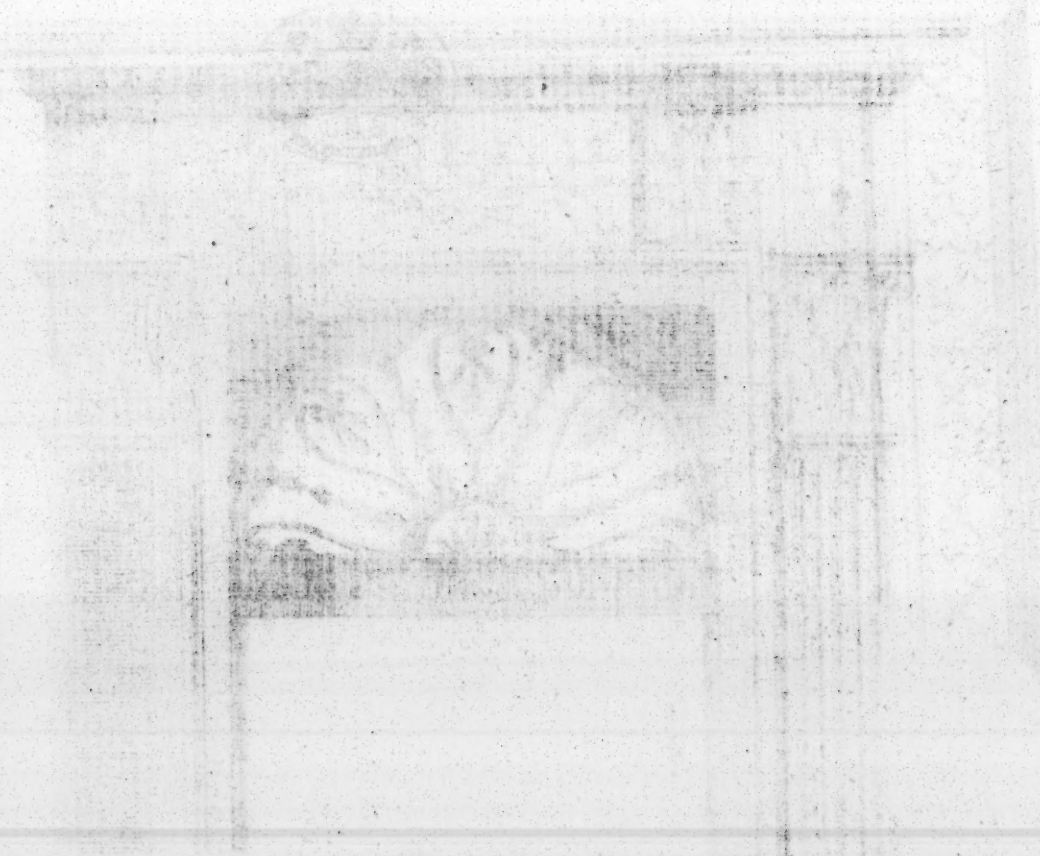
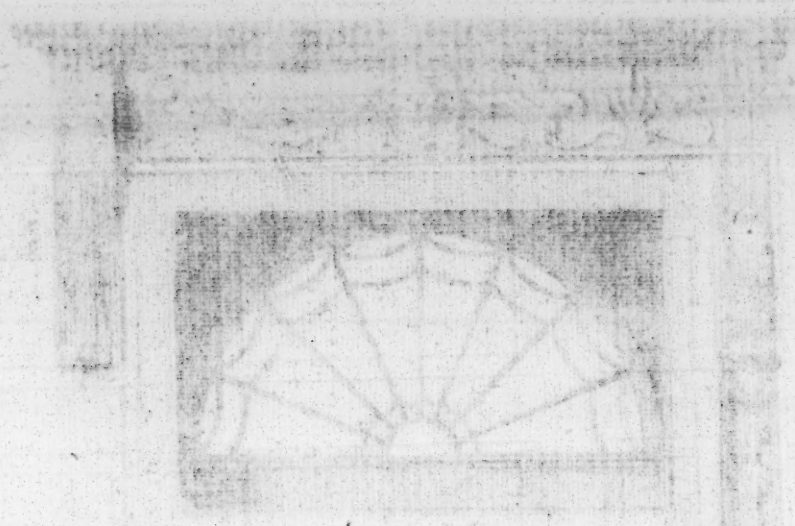






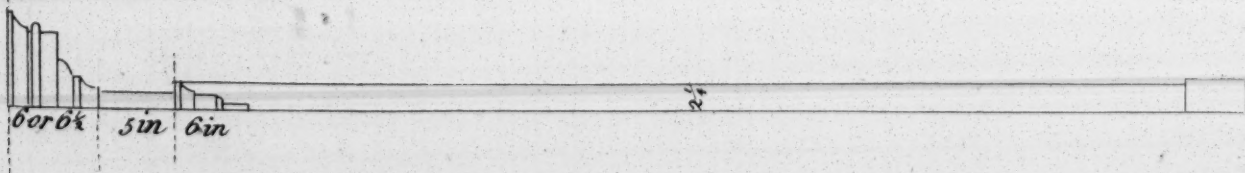
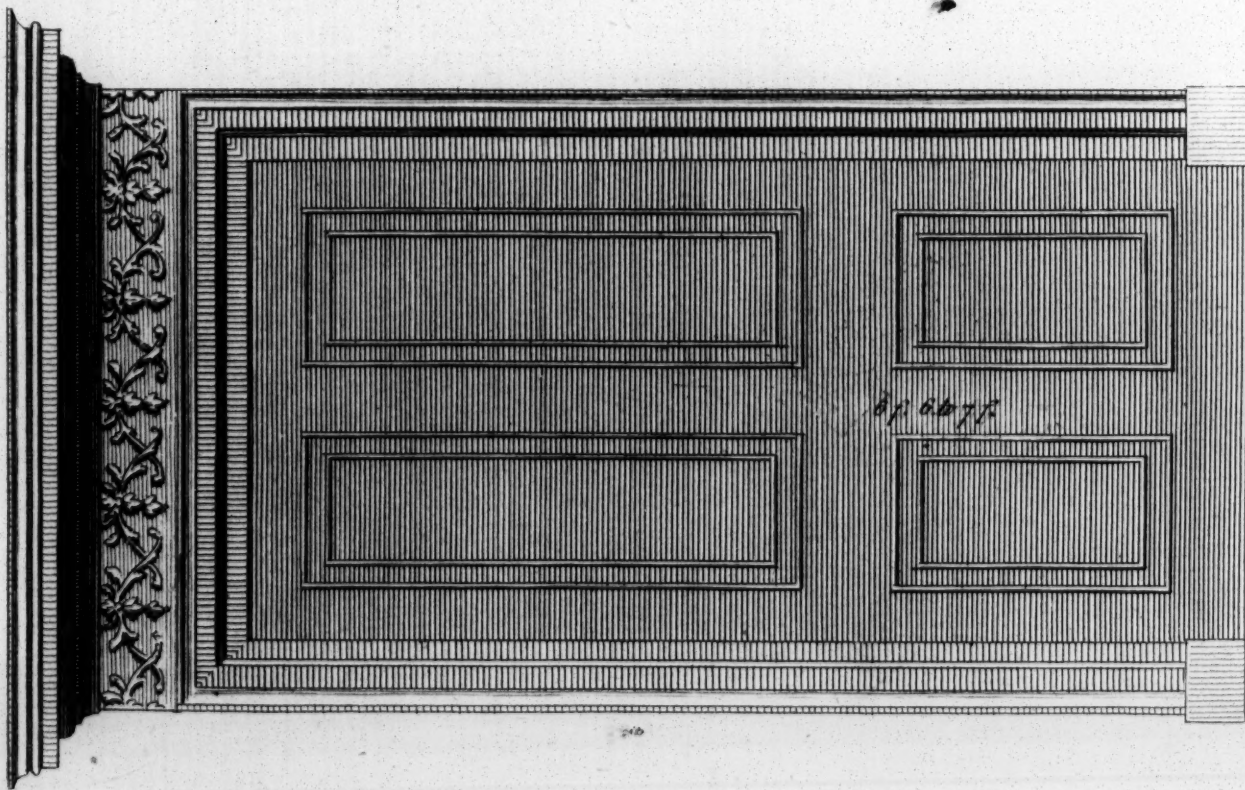
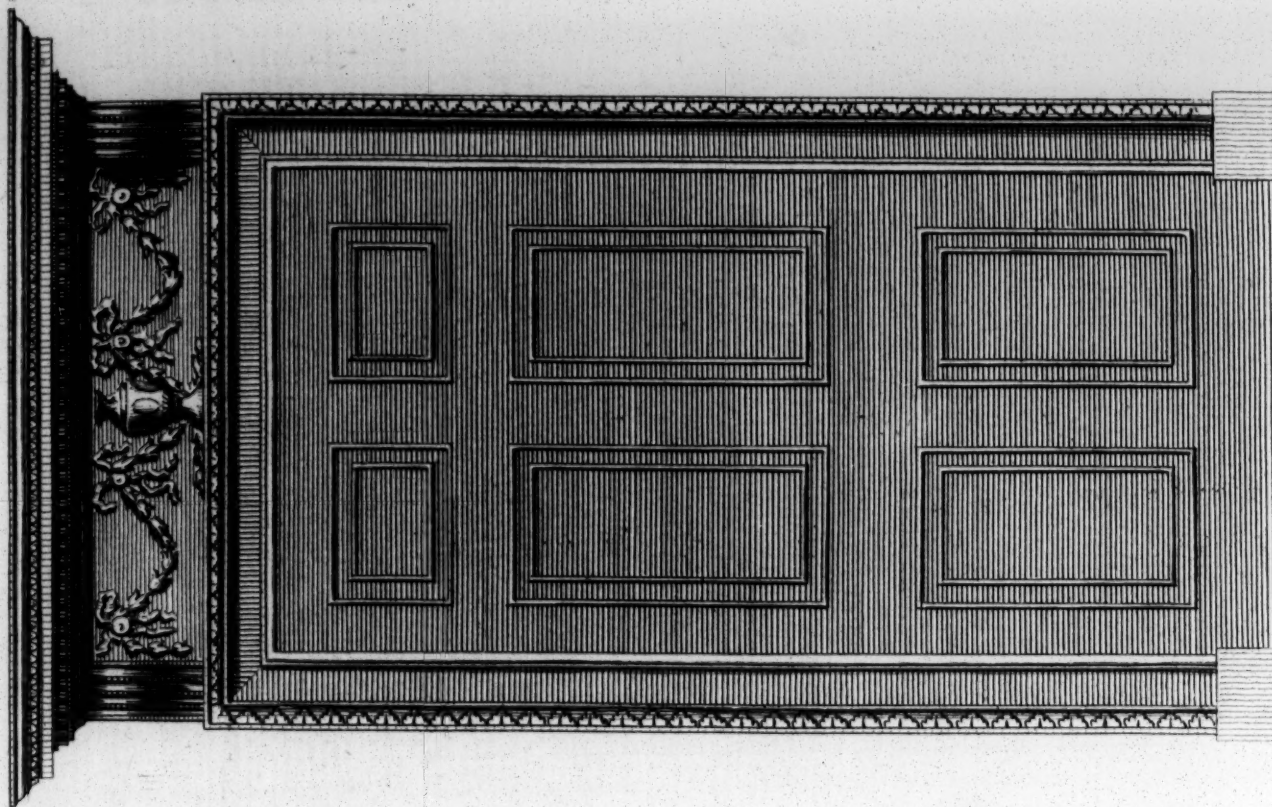
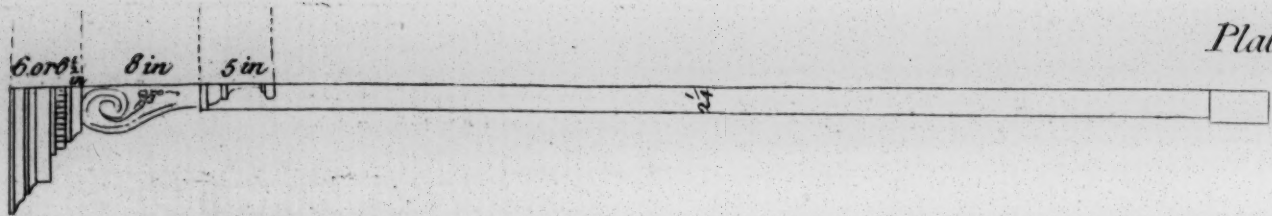
Designs for Door Cases.





Door Cases for Rooms.

Plate XXXIII.



THE UNIVERSITY OF CHICAGO

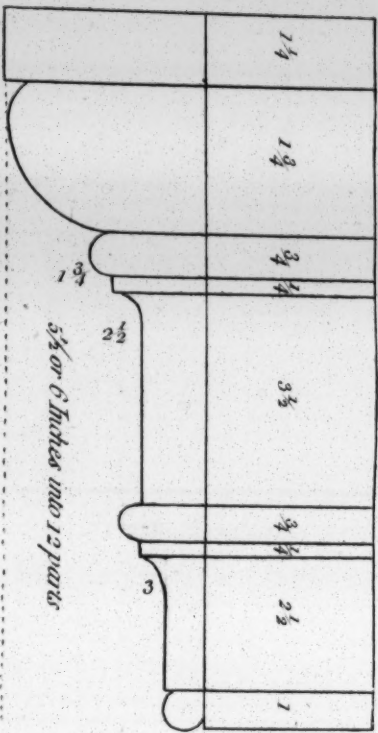
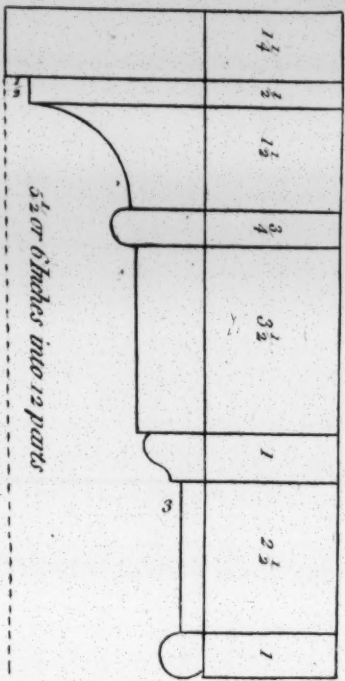
LIBRARY



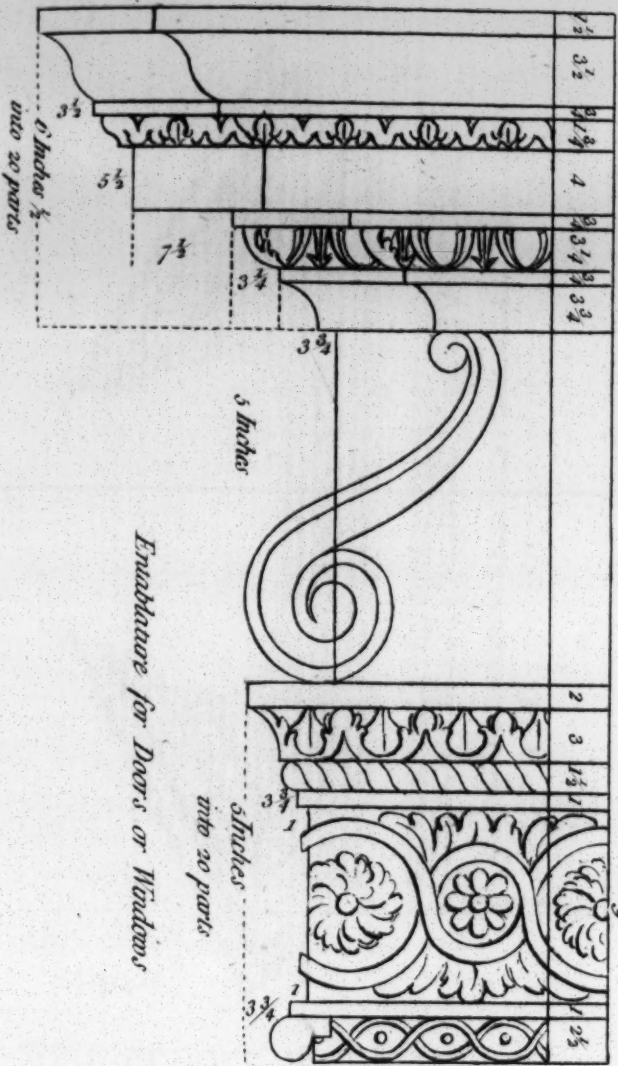
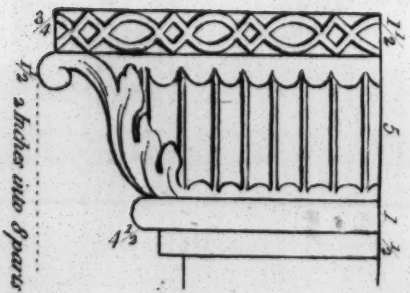
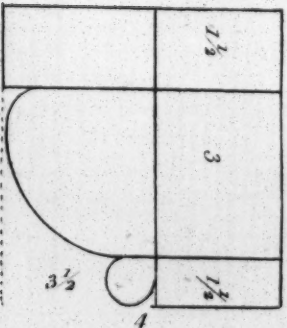
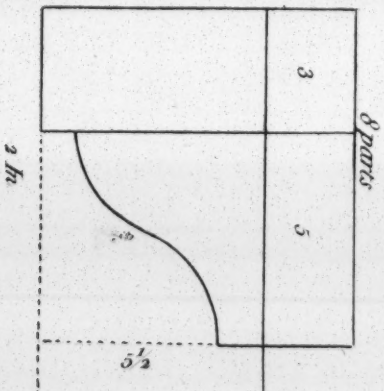
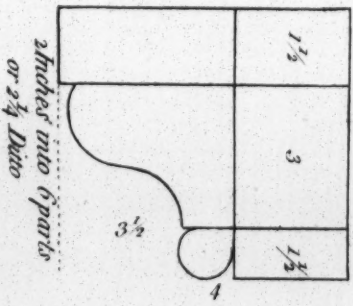
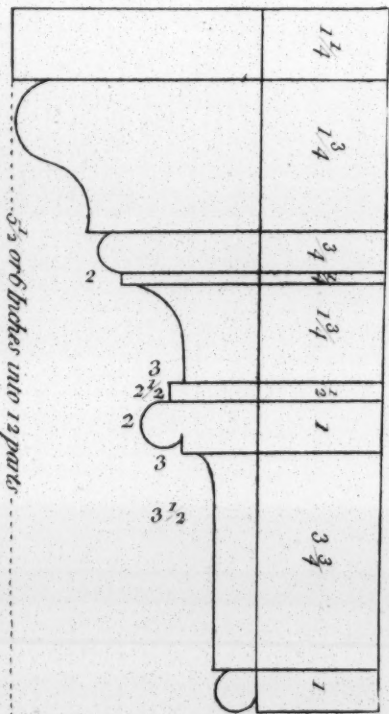
FOUNTAIN



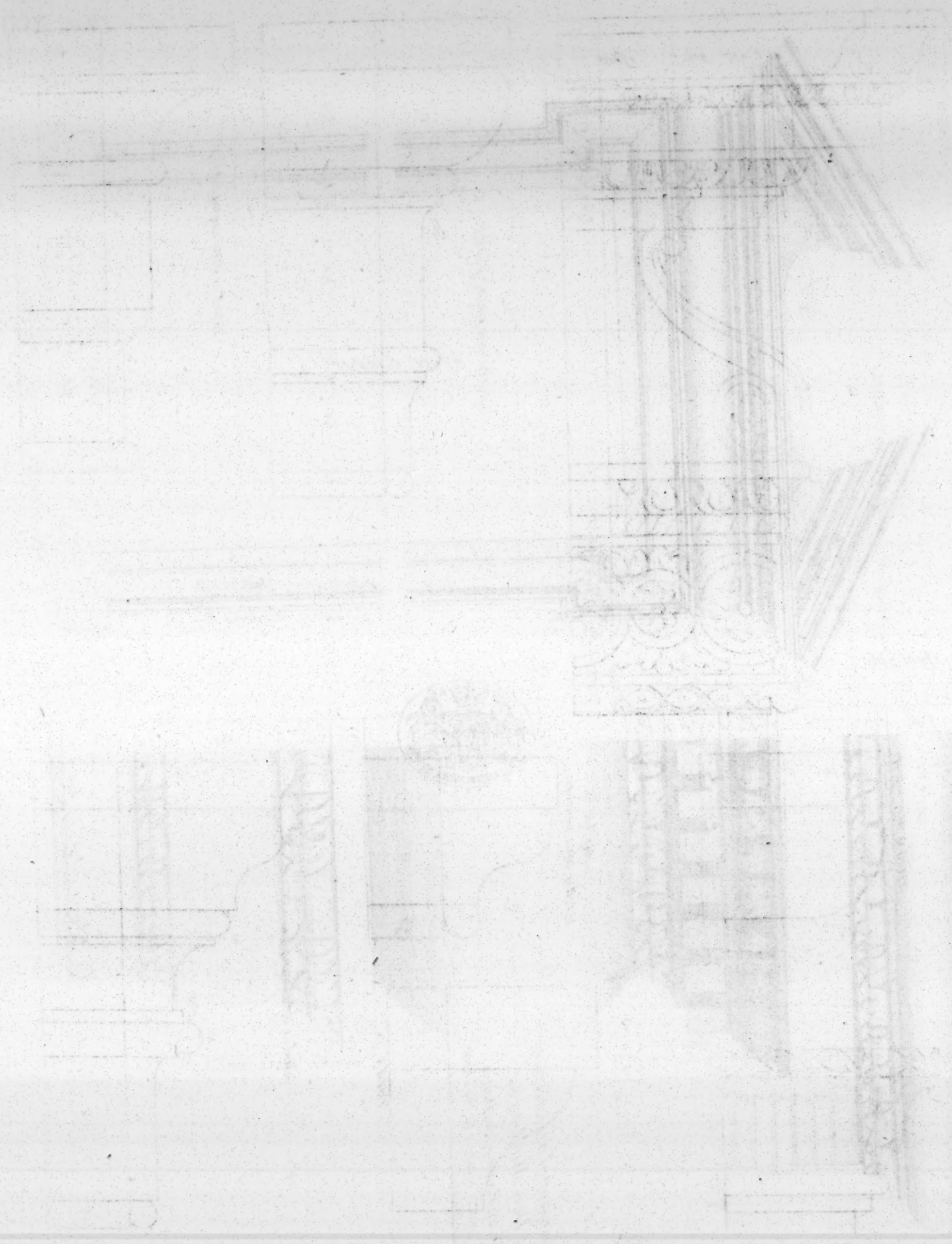
XXXXXX
XXXXXX
XXXXXX

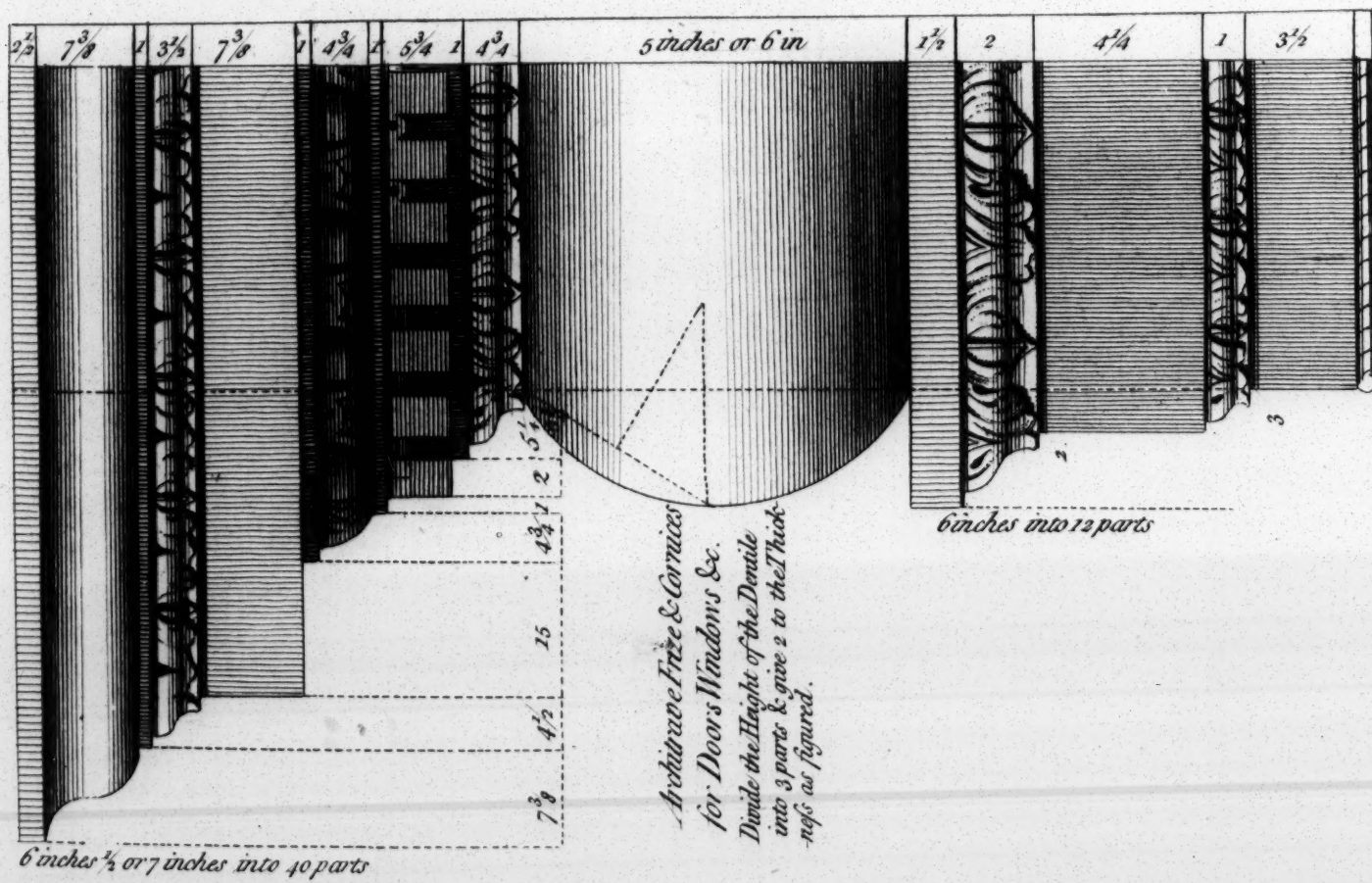
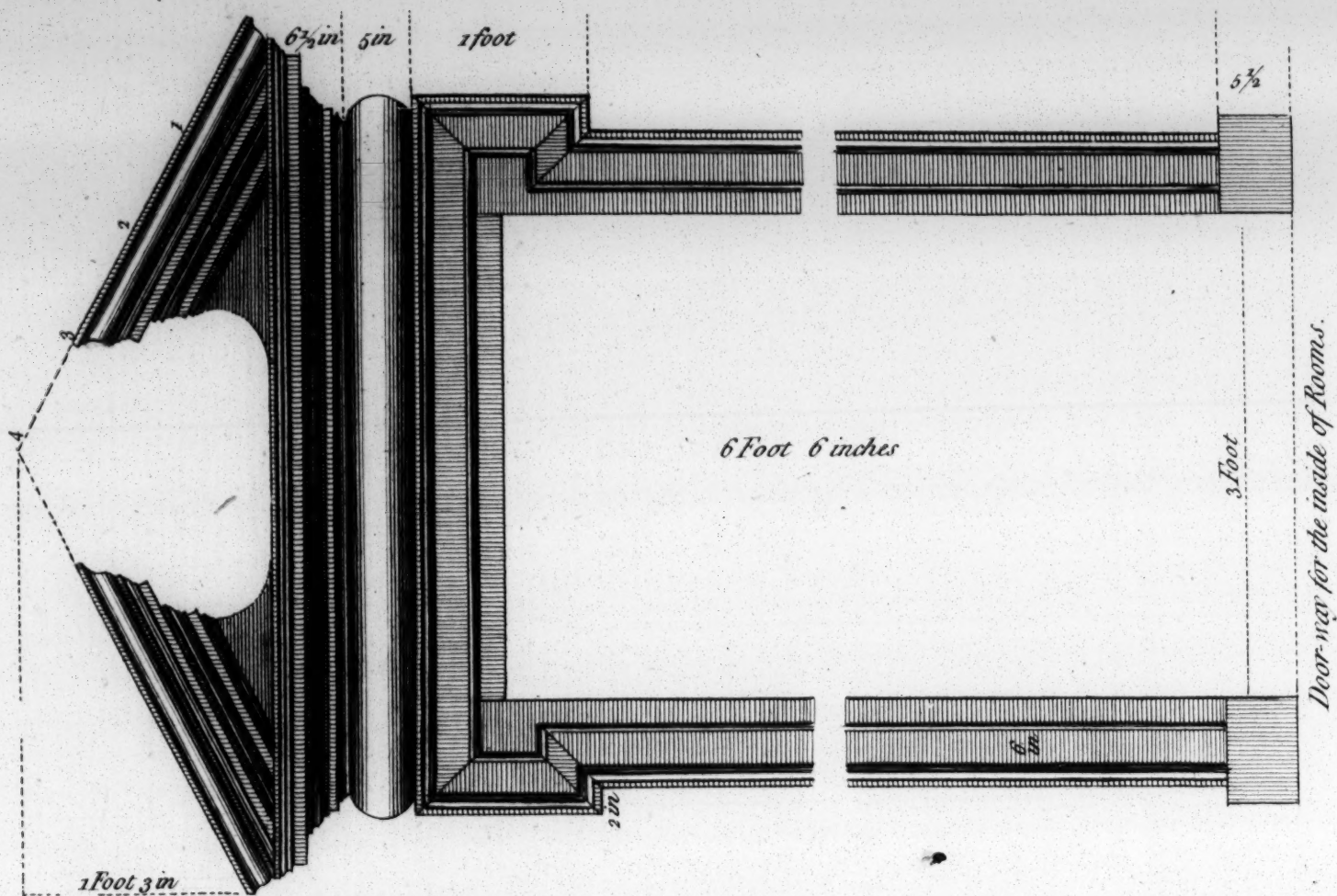


Architrave Mouldings
for Doors, Windows &c.

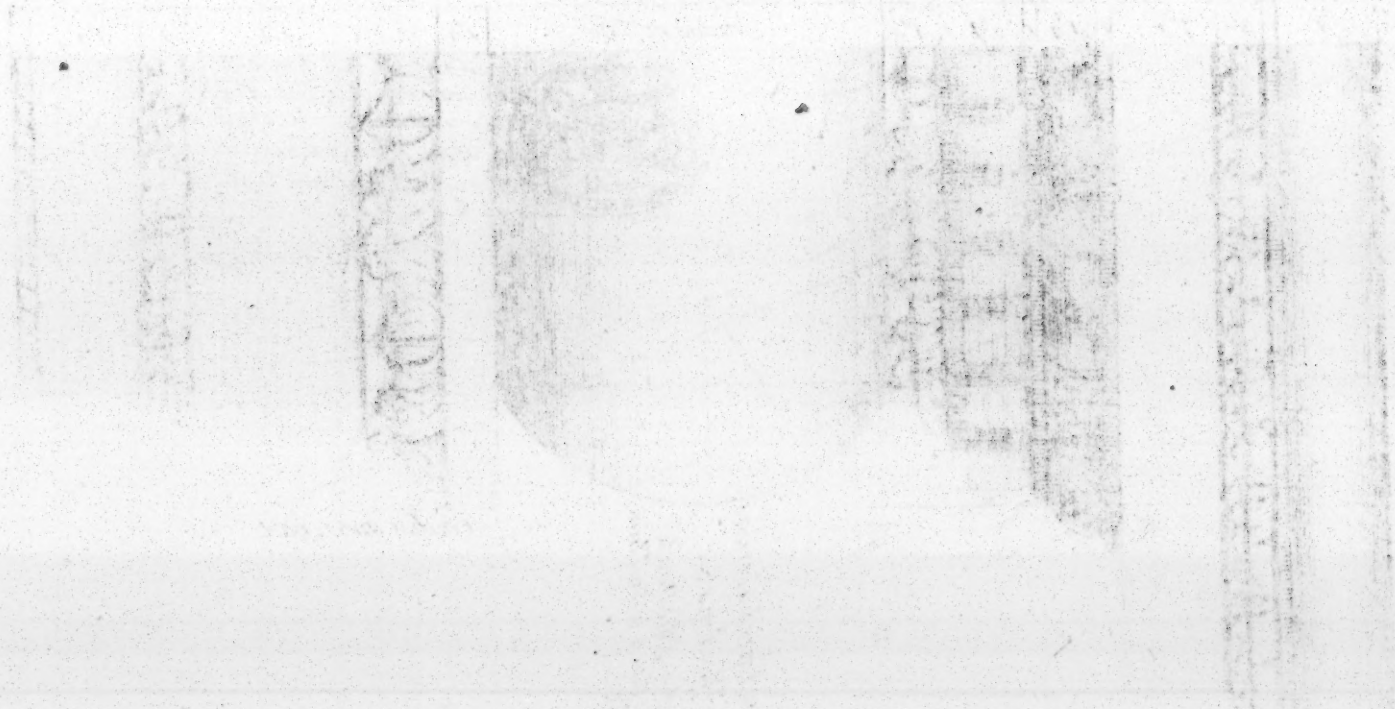
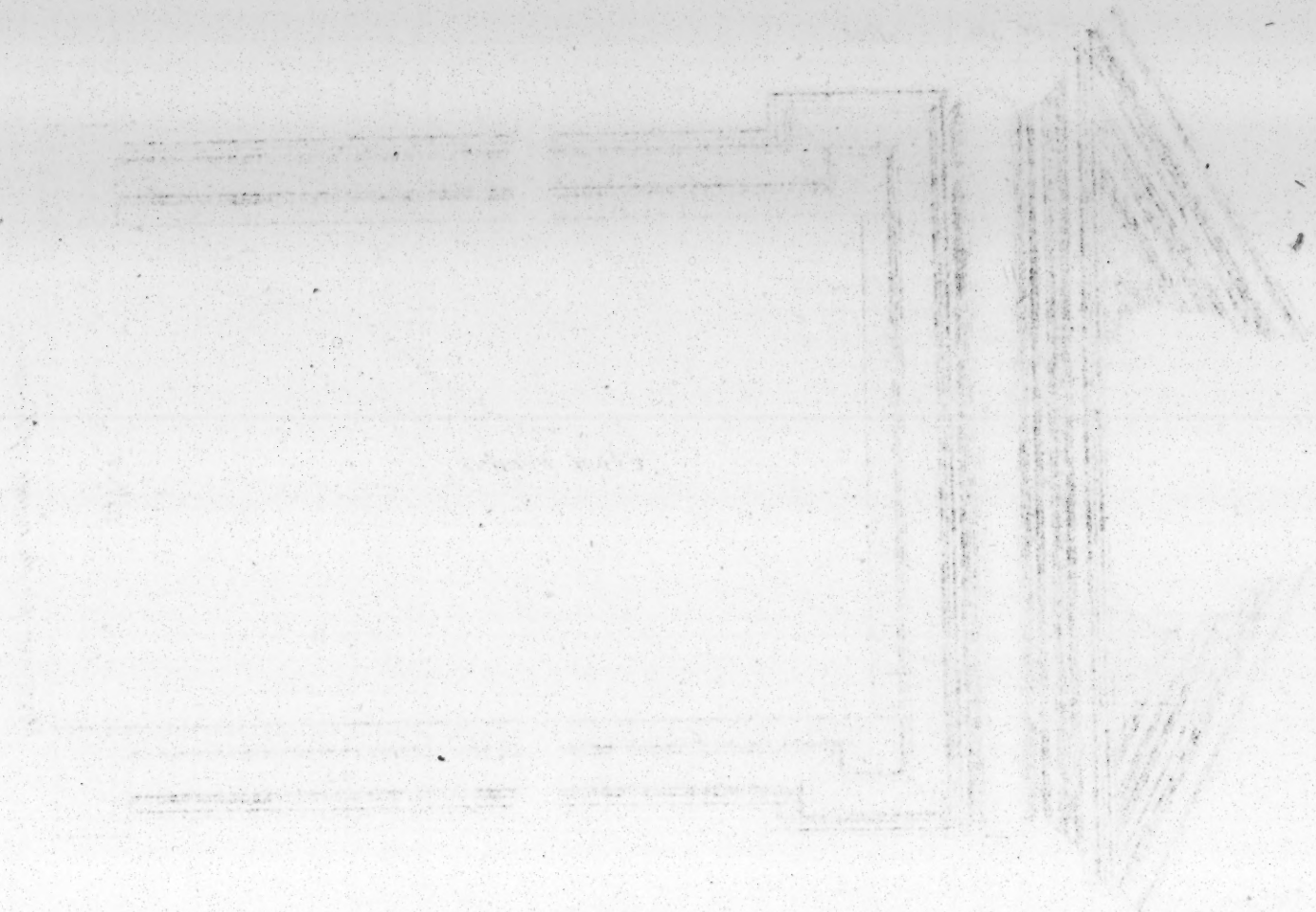


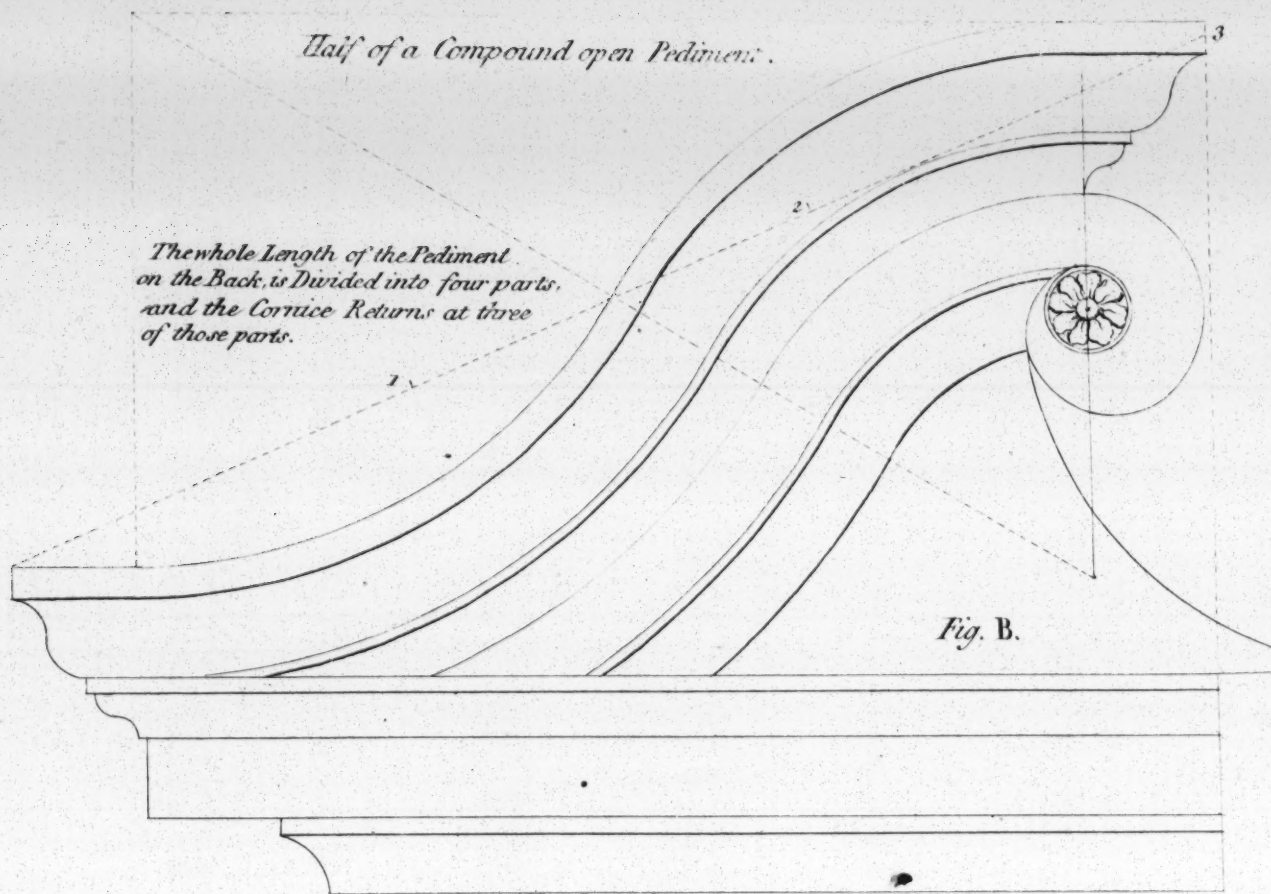
Embellishes for Doors or Windows



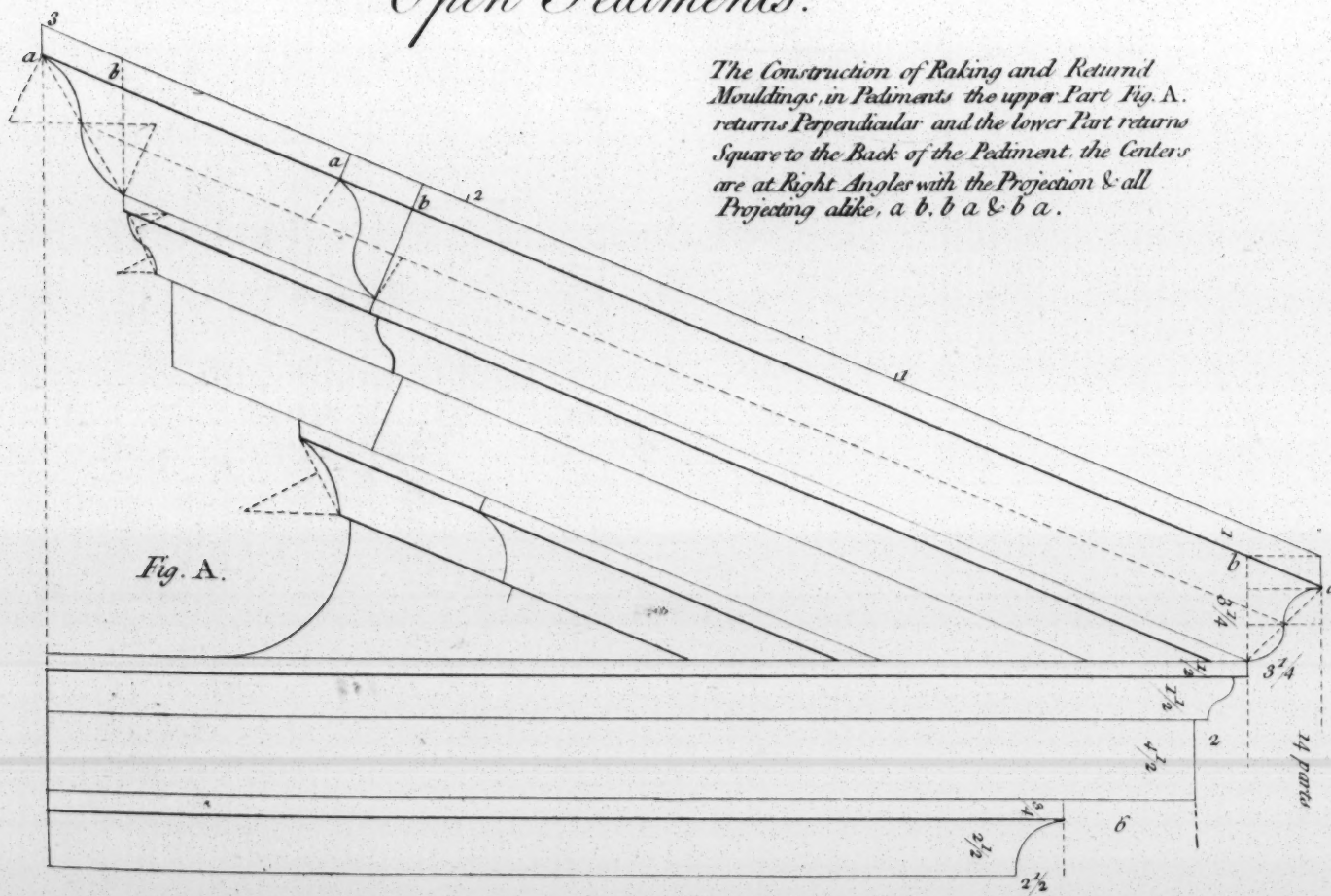


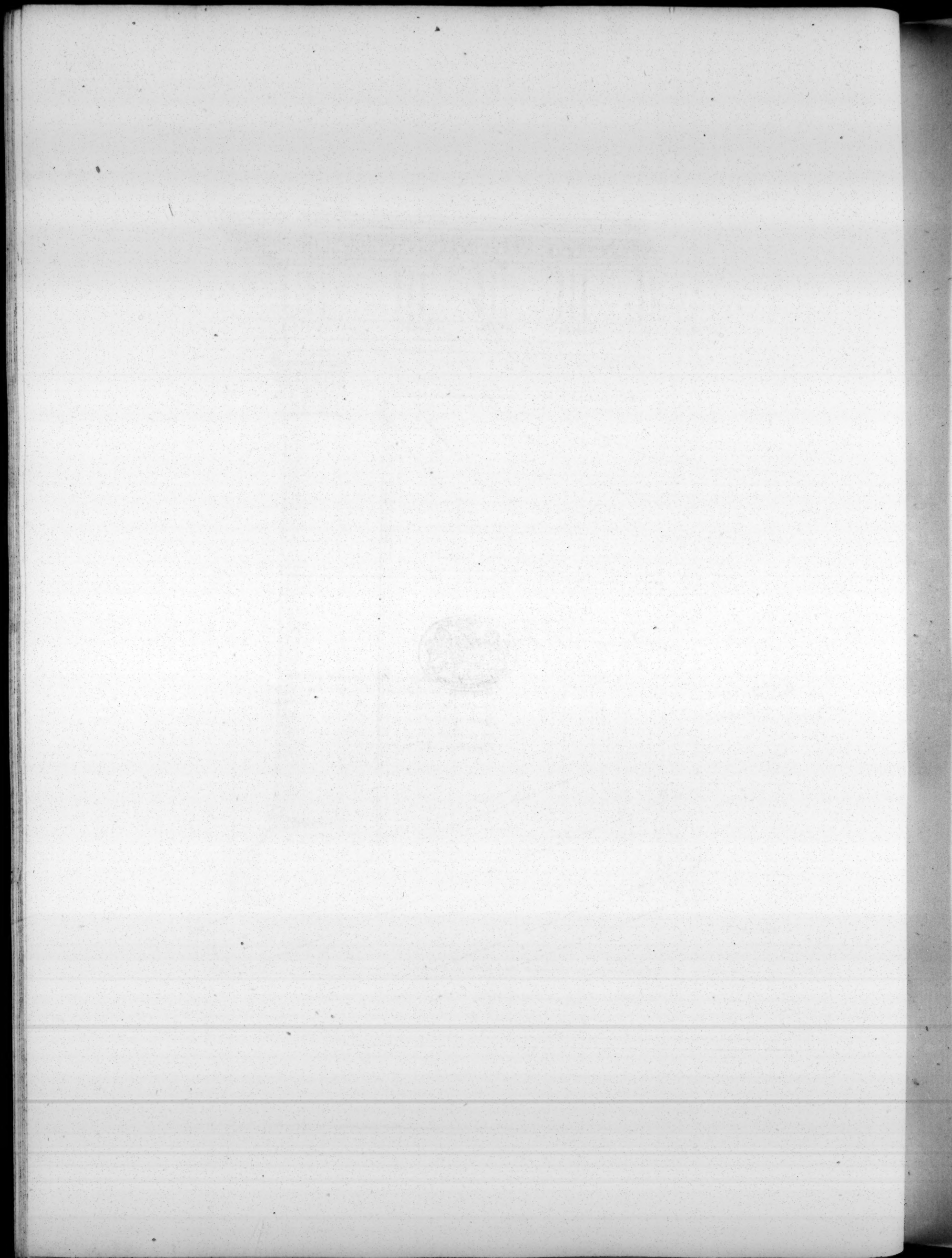
11/1/1888

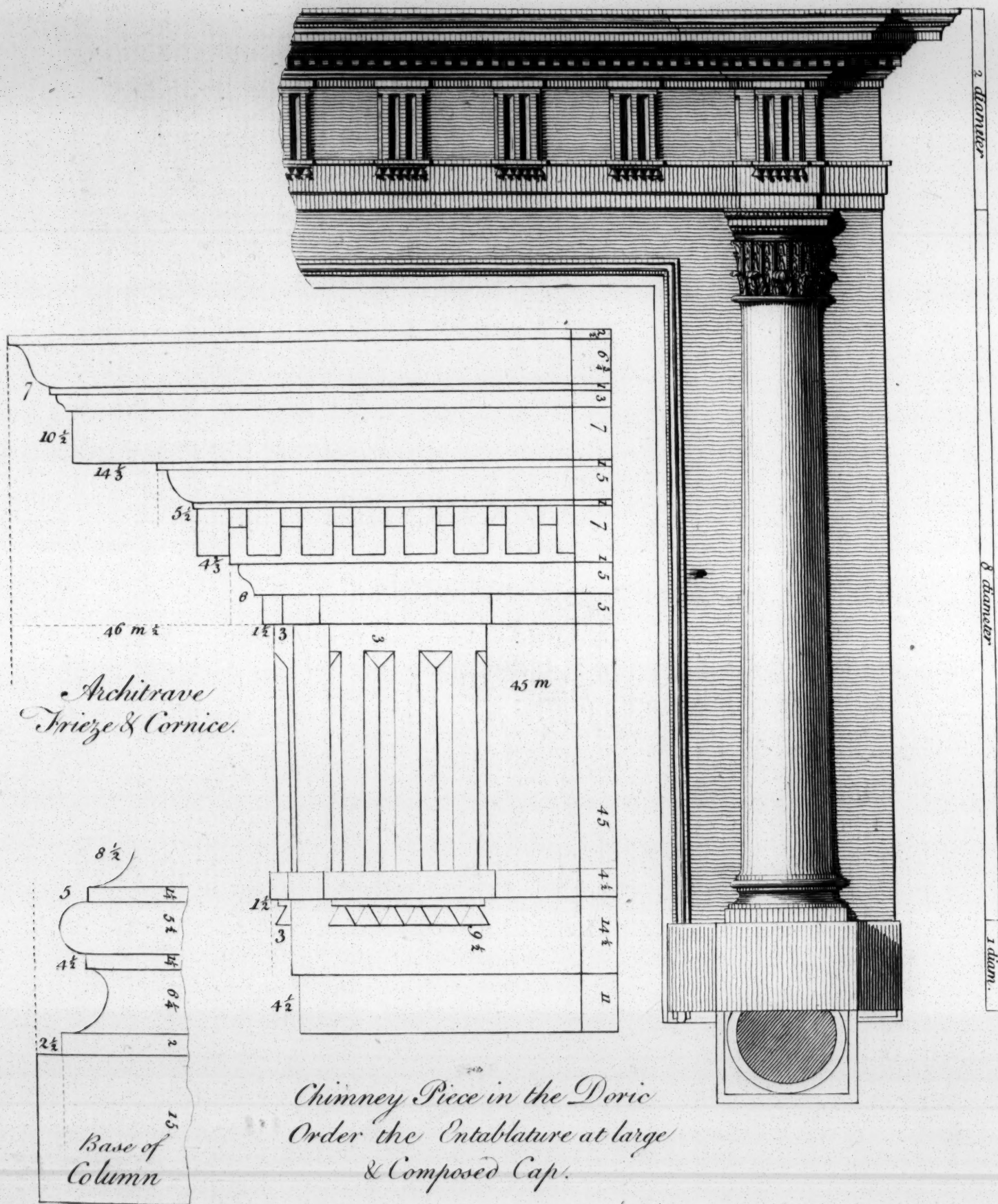


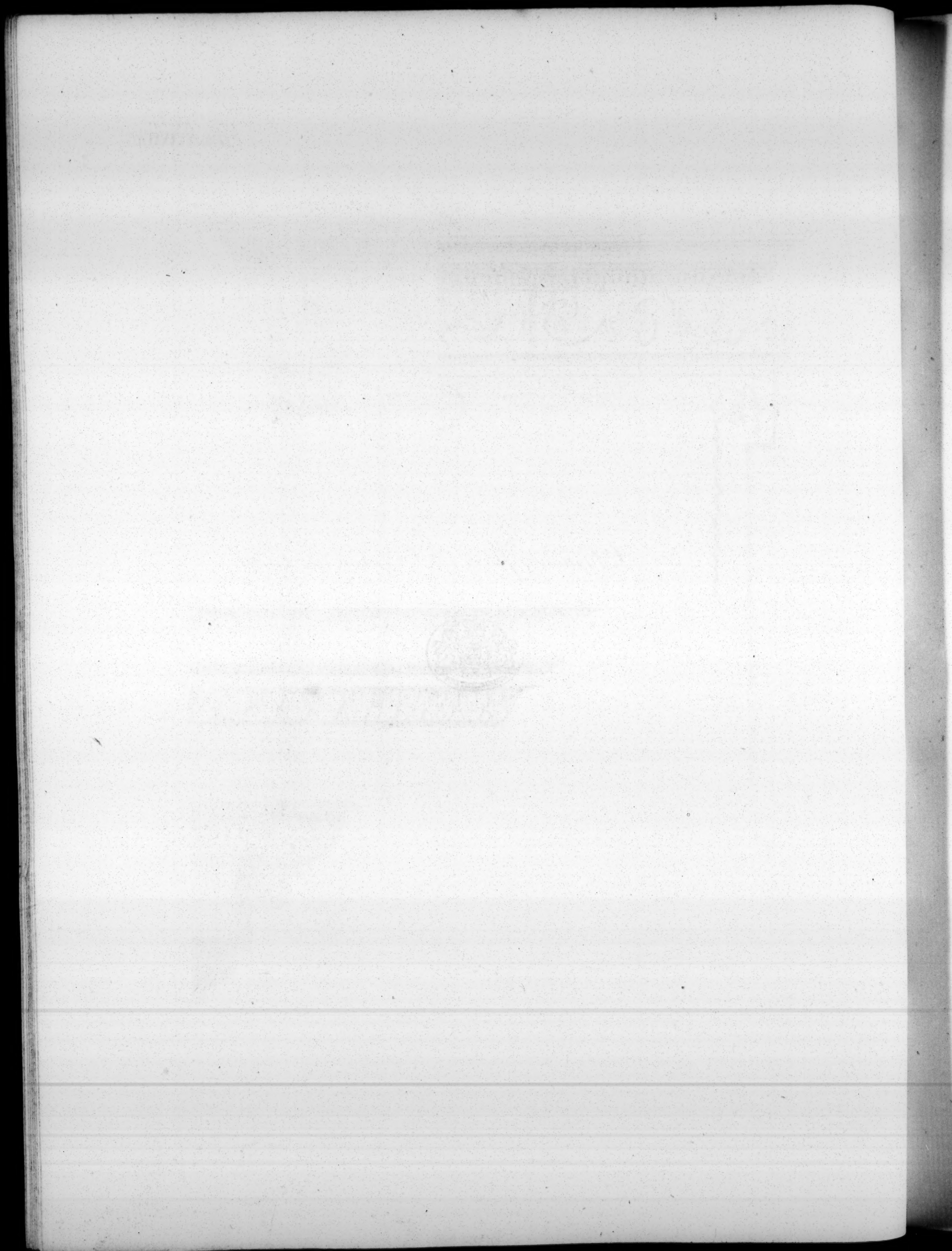


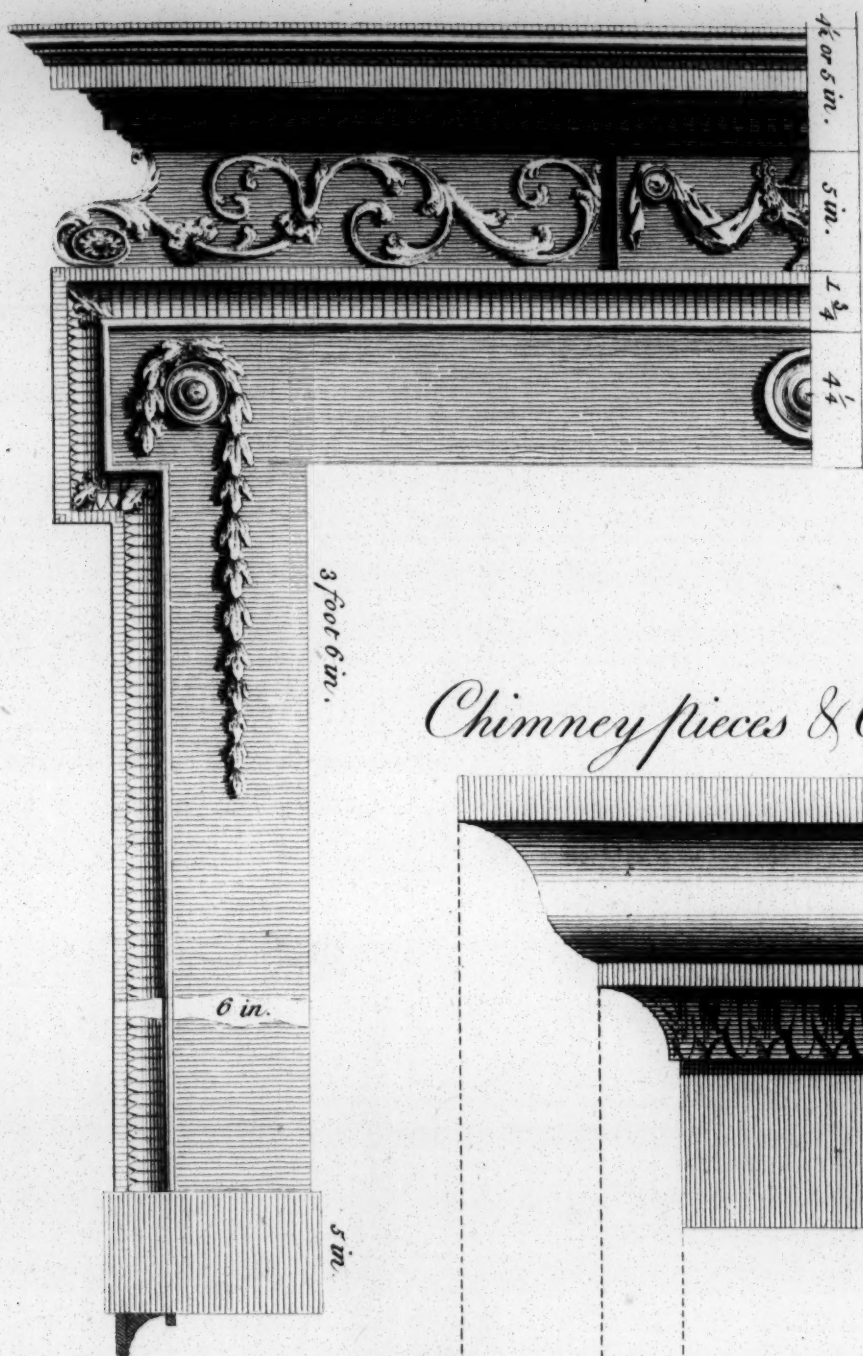
Open Pediments.



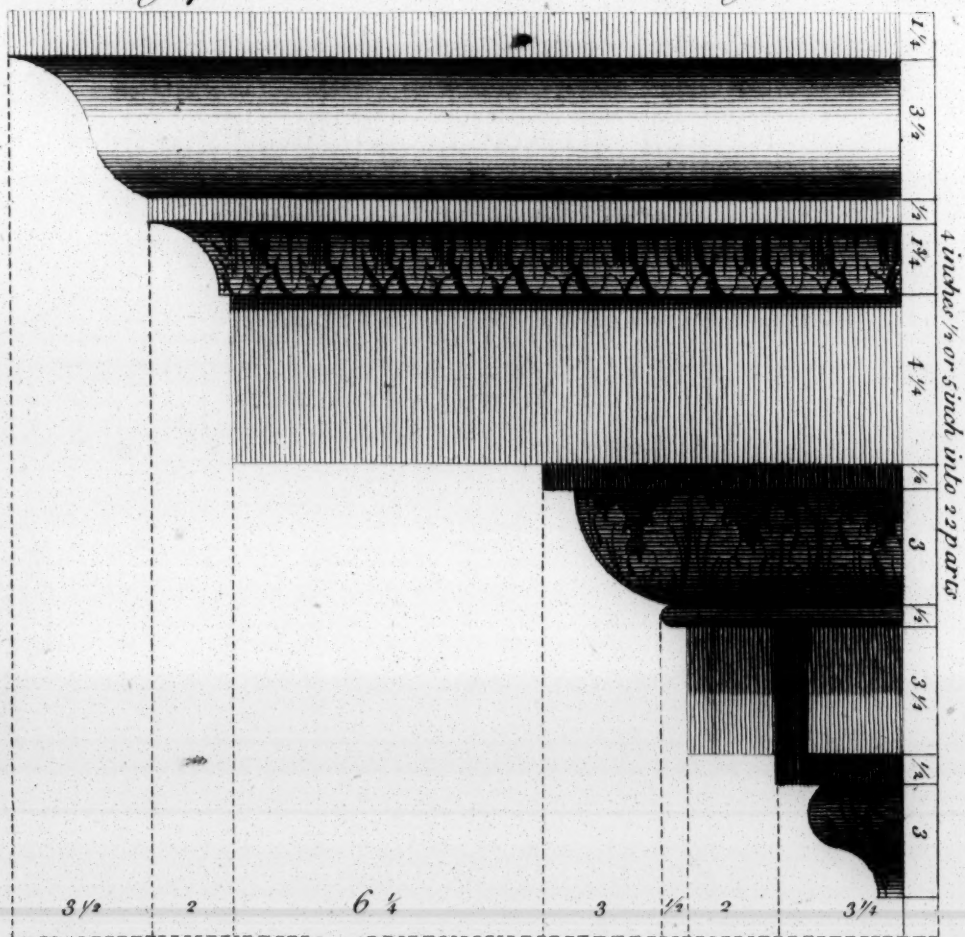


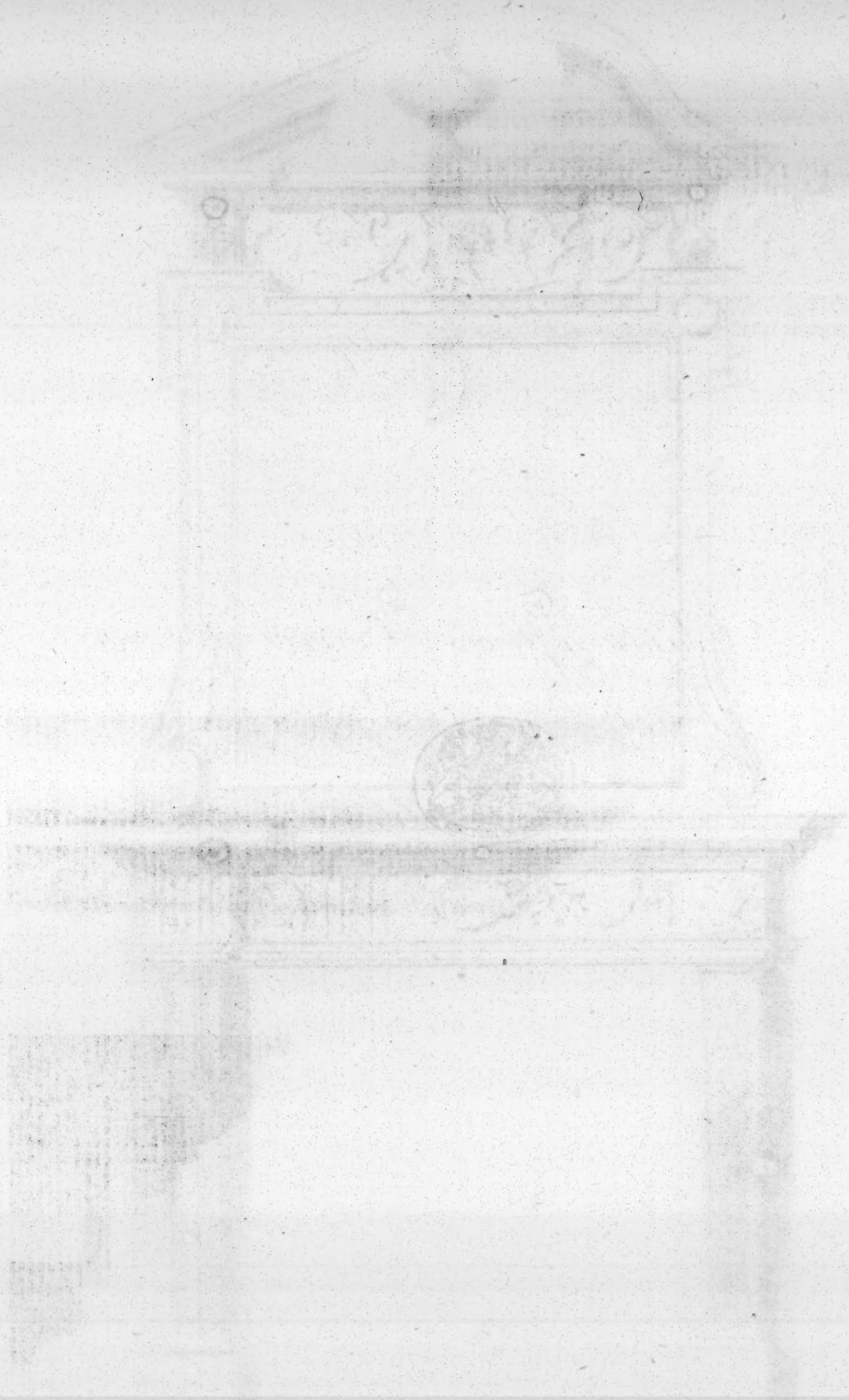




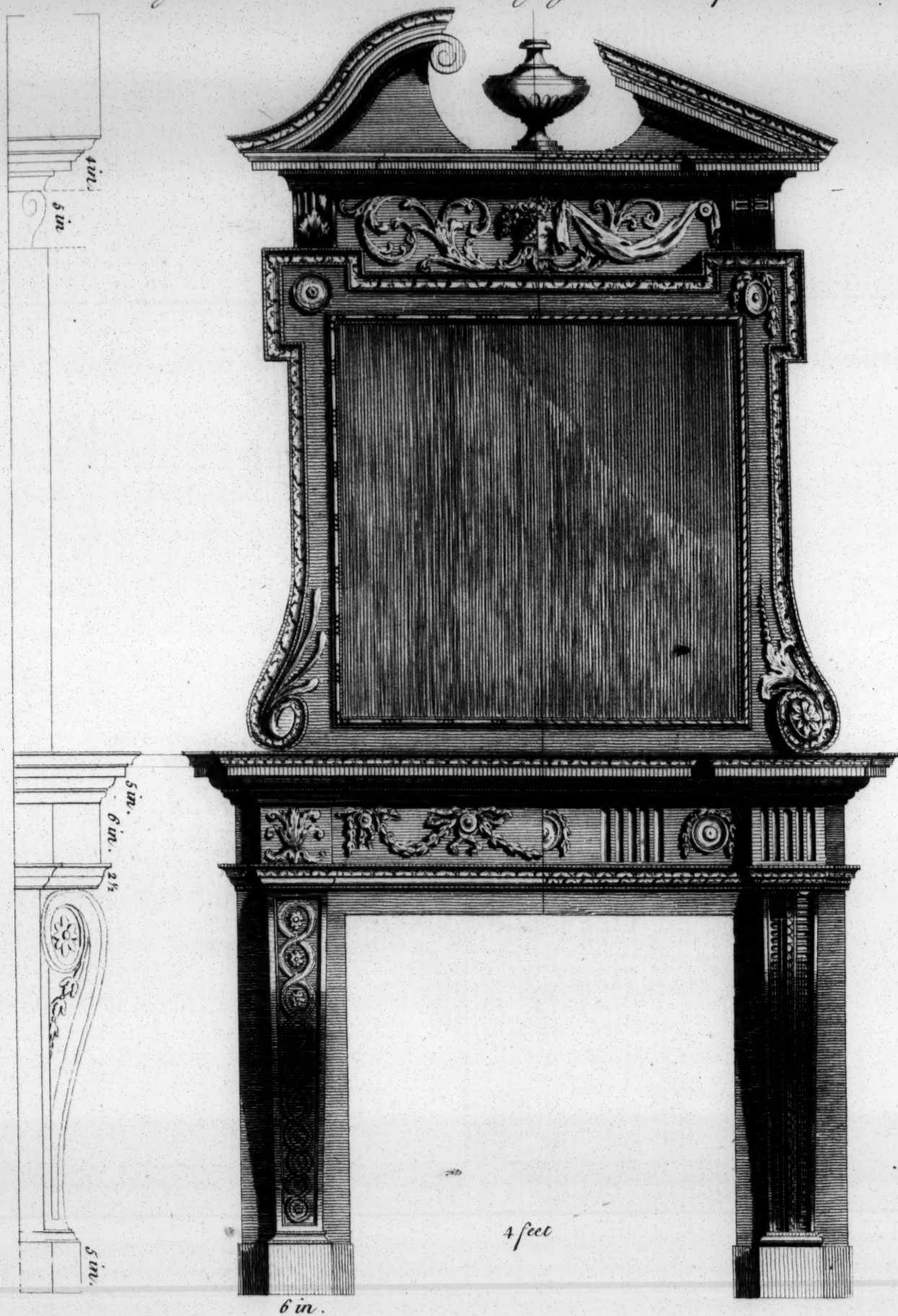


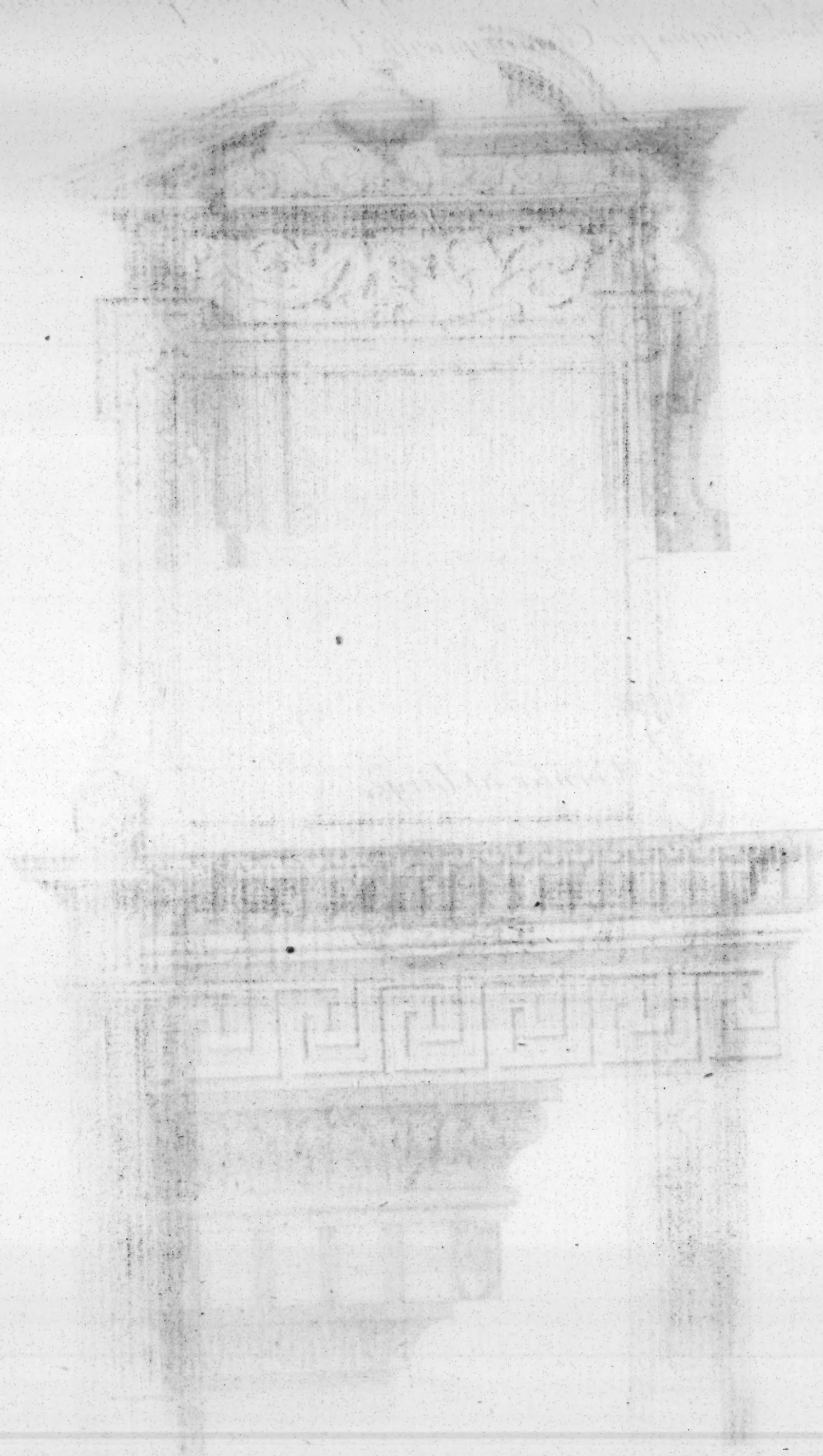
Chimney pieces & Cornice at Large



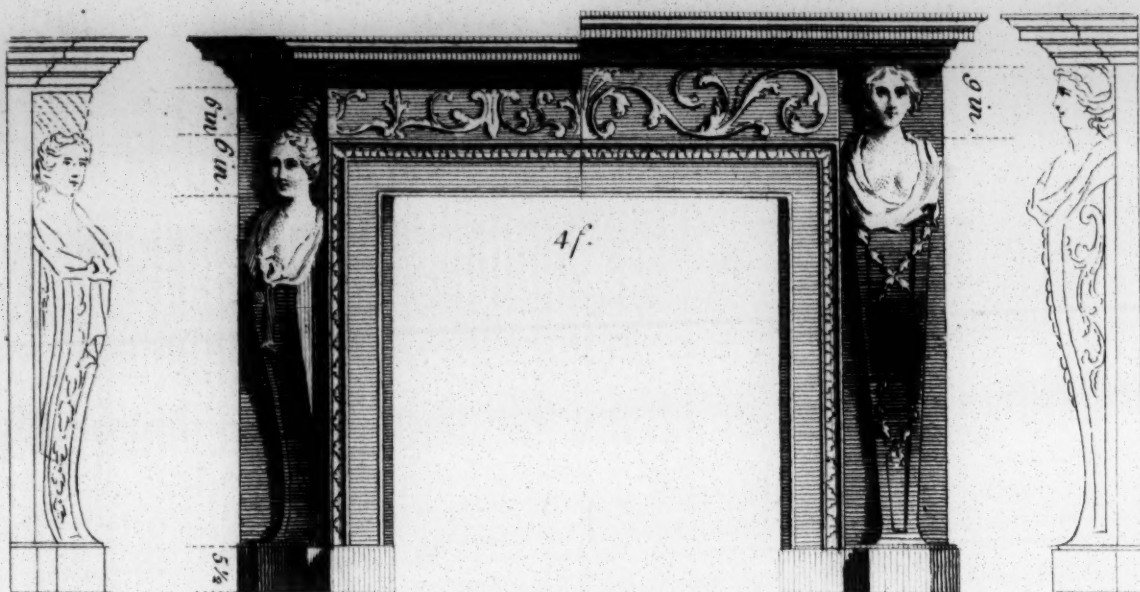


Two Chimney Pieces with open Pediment, Glass or Picture frames ornamented. Plate XXXIX.

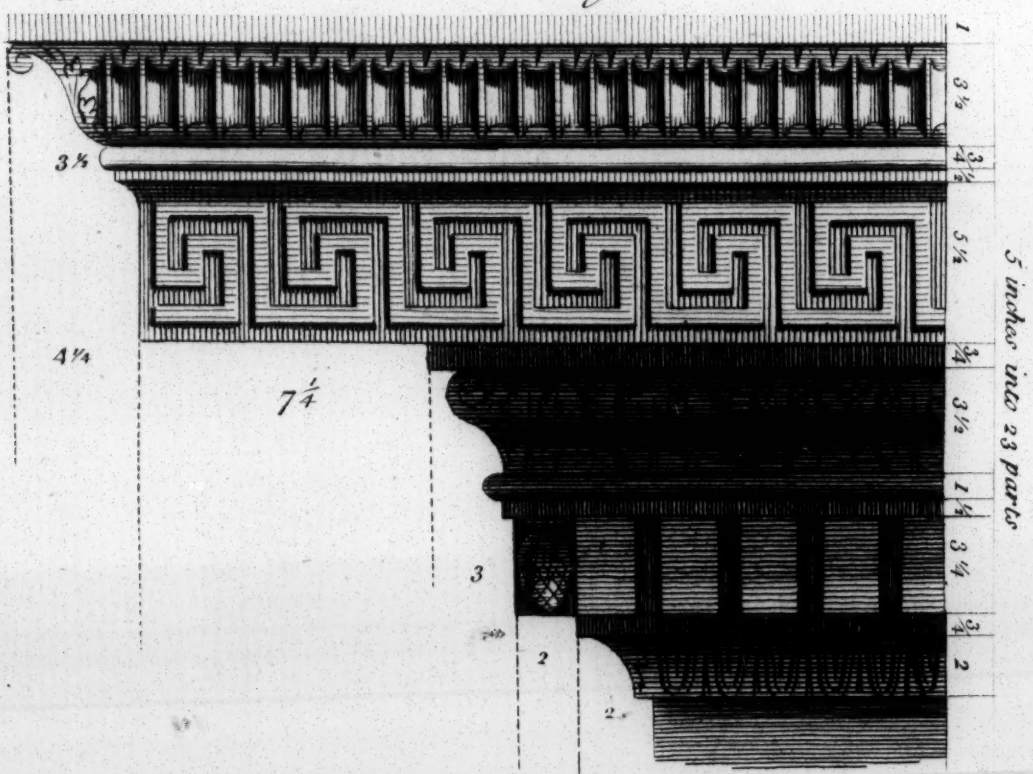


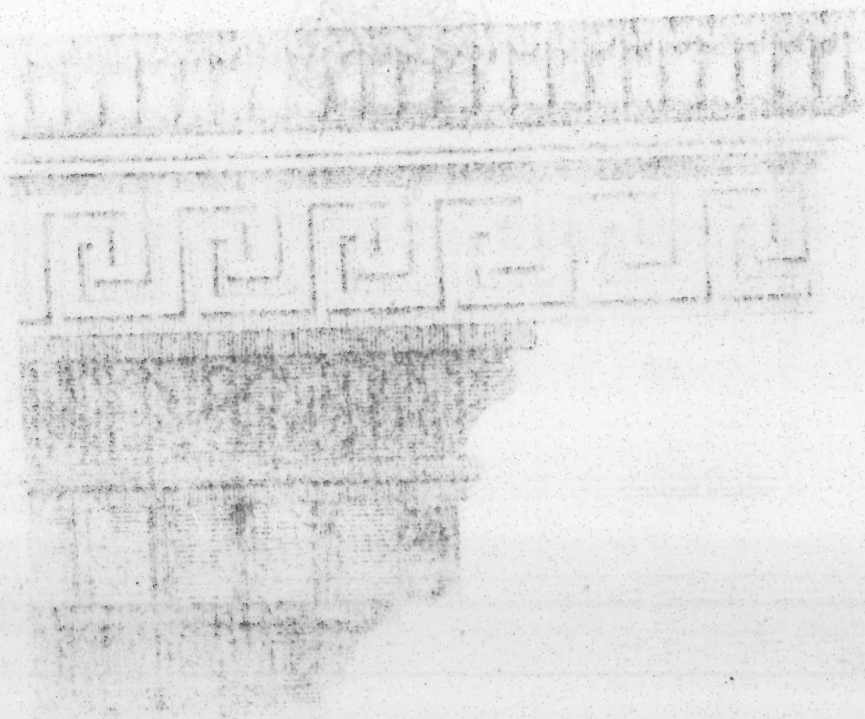
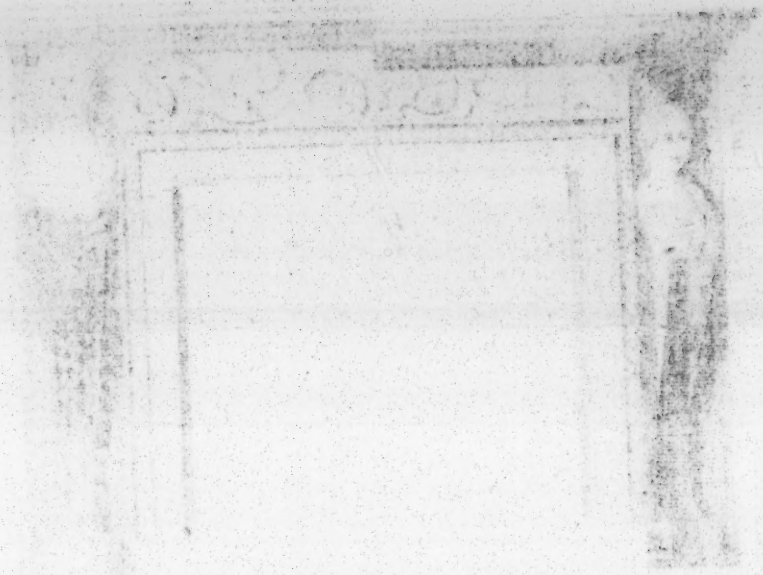


Two Designs for Chimneys with Caryattic Figures.

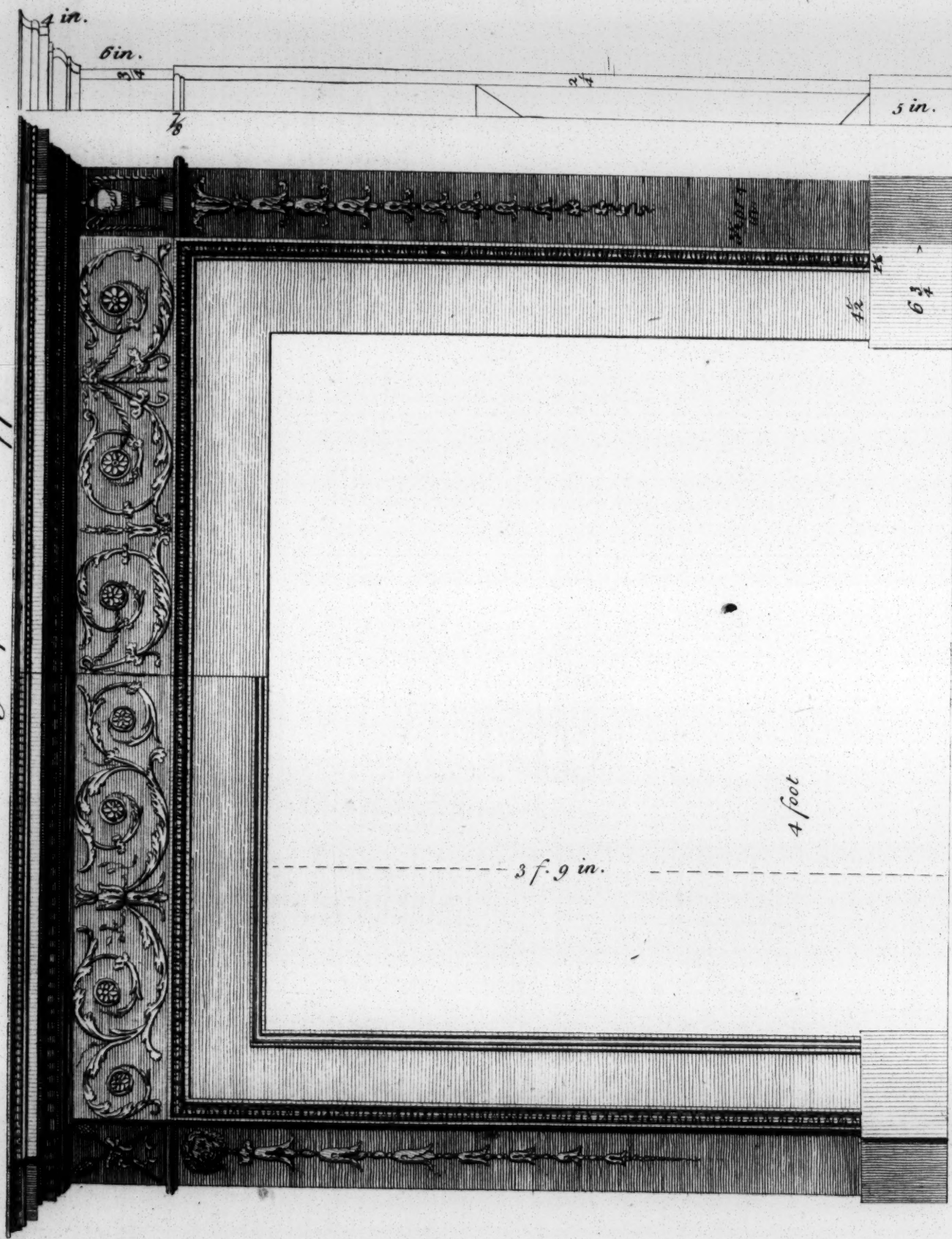


Cornice at large.

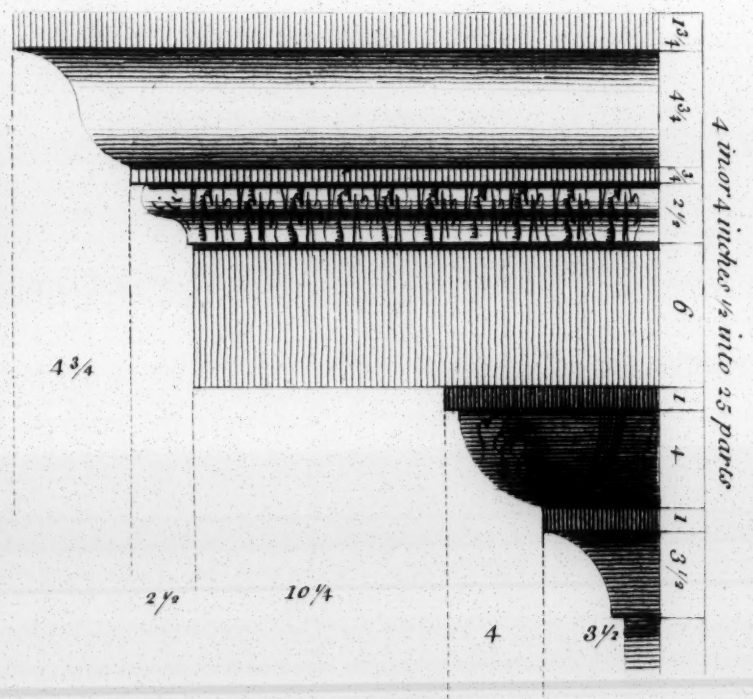
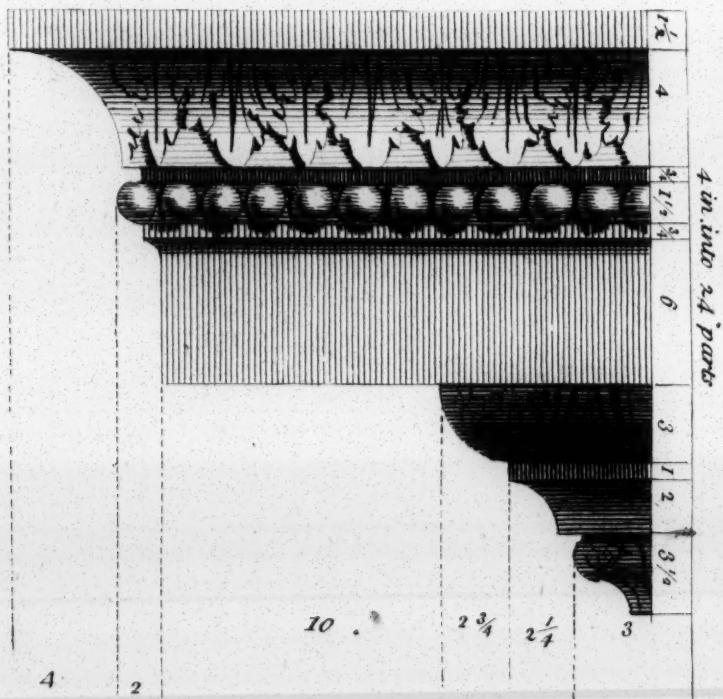
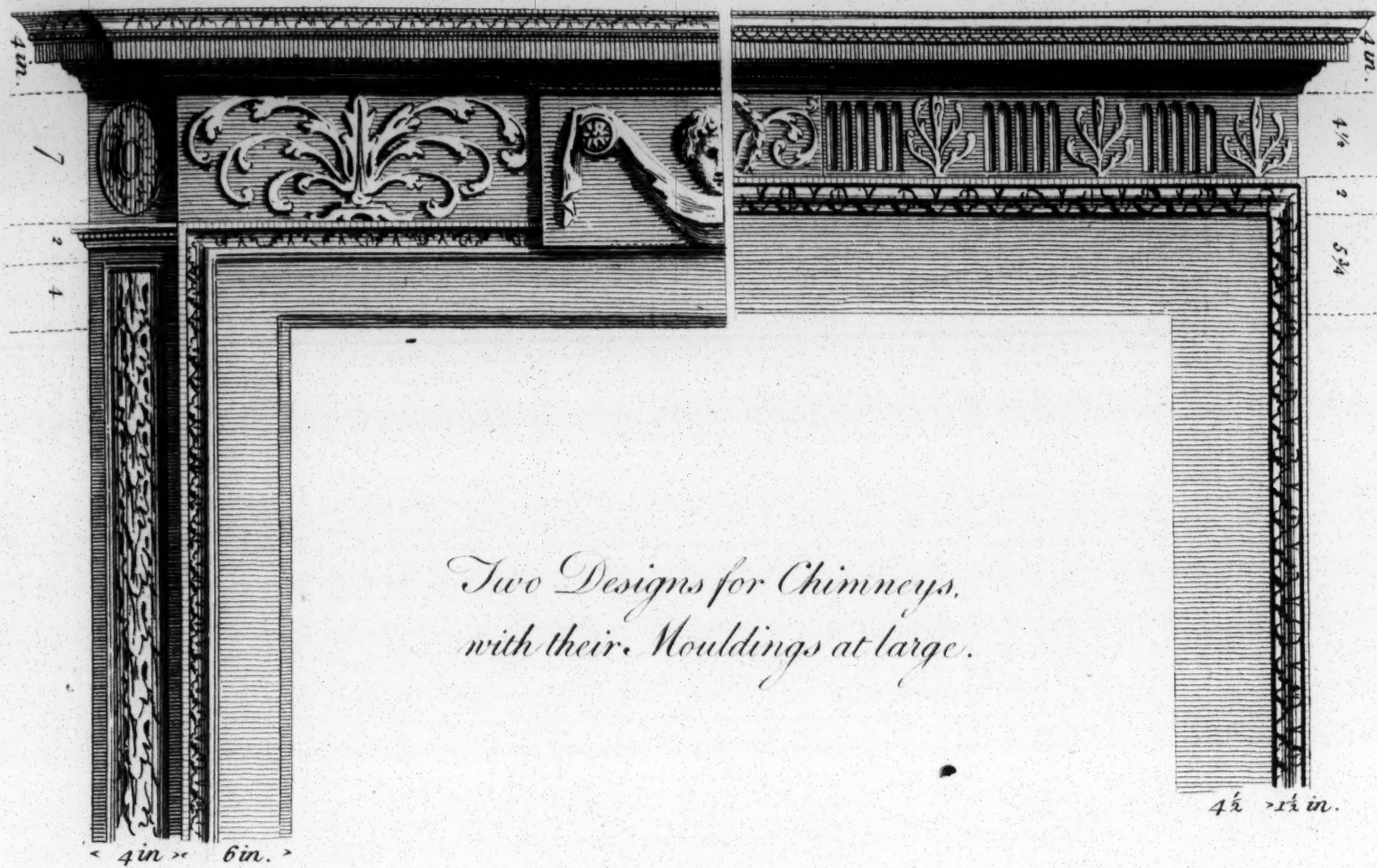




Two Designs for Chimney pieces.







1871

THE
OFFICE OF THE
SHERIFF
OF THE COUNTY OF
SHERBORN
HANTS
1871

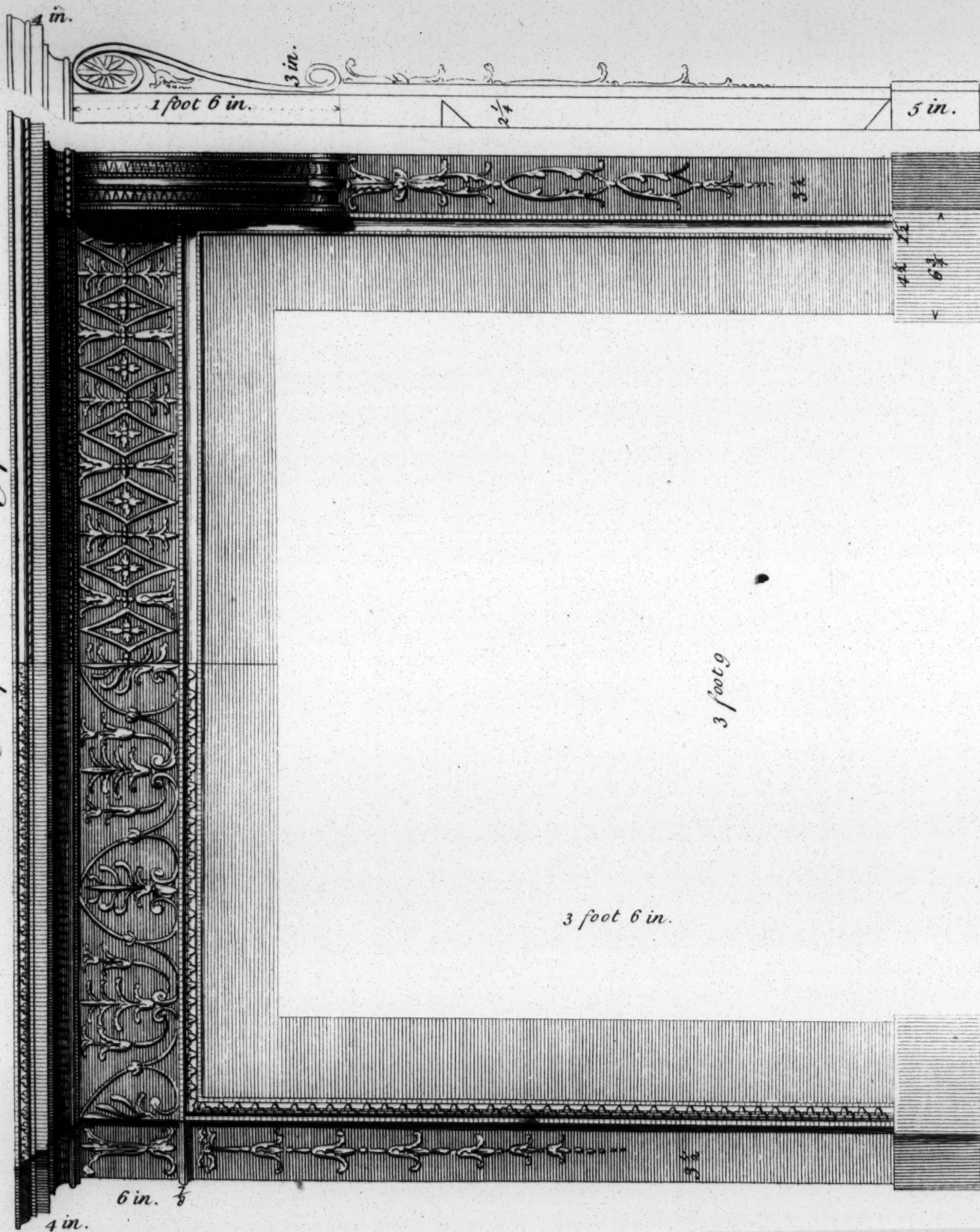


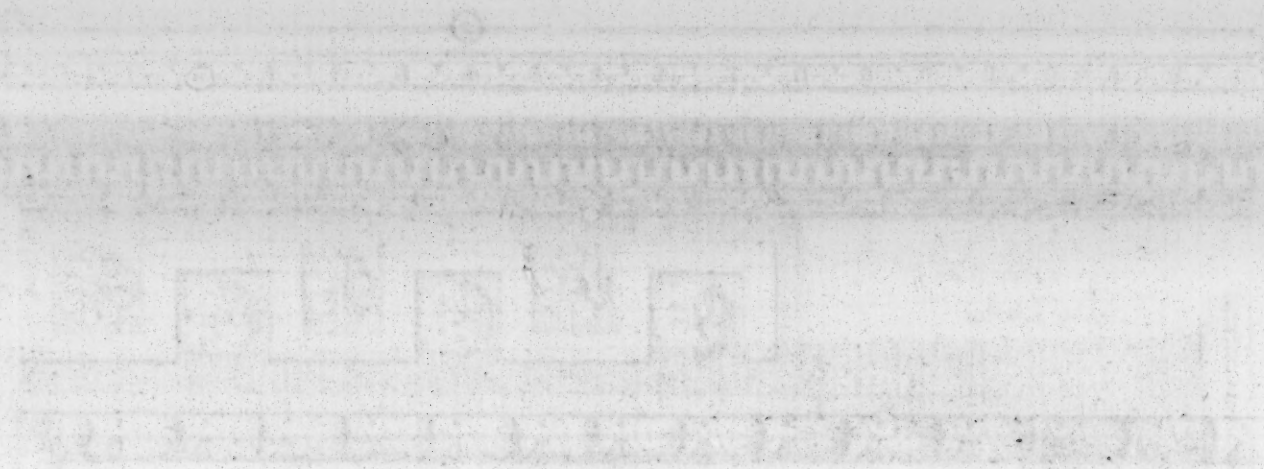
THE
OFFICE OF THE
SHERIFF
OF THE COUNTY OF
SHERBORN
HANTS
1871

THE
OFFICE OF THE
SHERIFF
OF THE COUNTY OF
SHERBORN
HANTS
1871

THE
OFFICE OF THE
SHERIFF
OF THE COUNTY OF
SHERBORN
HANTS
1871

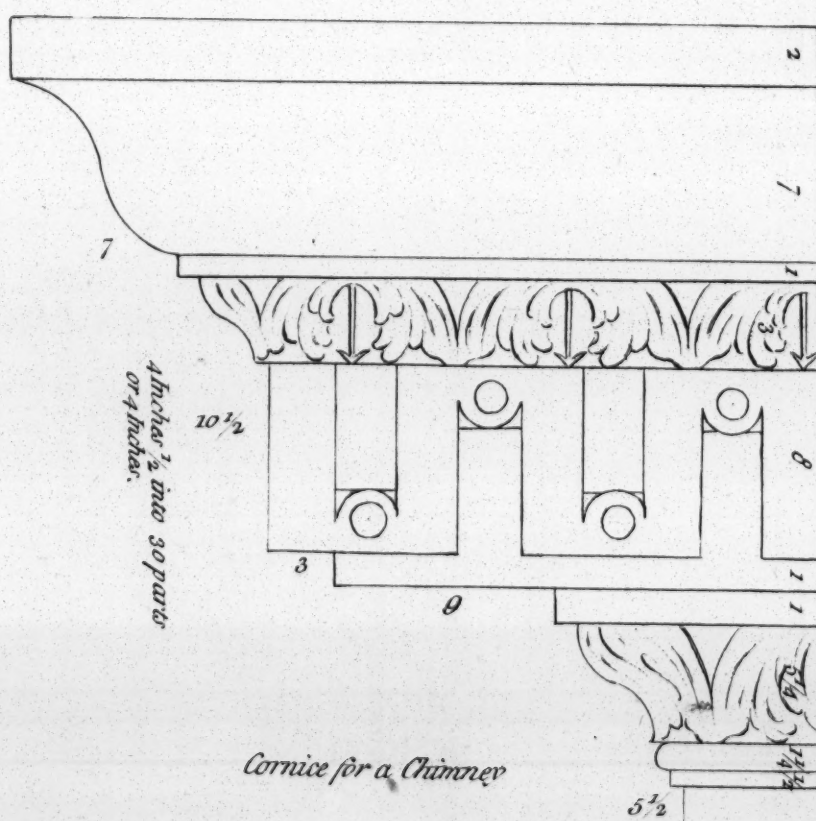
Two Designs for Chimney-pieces.



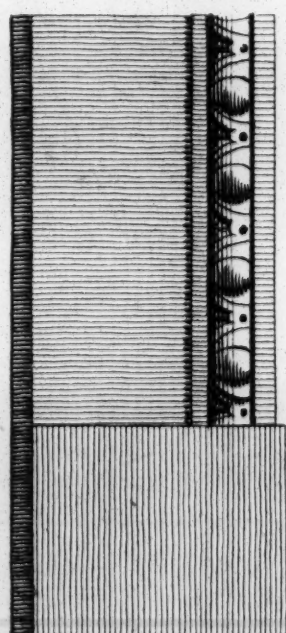
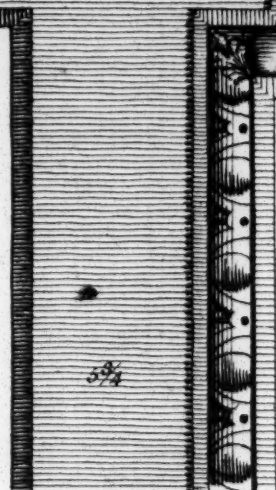


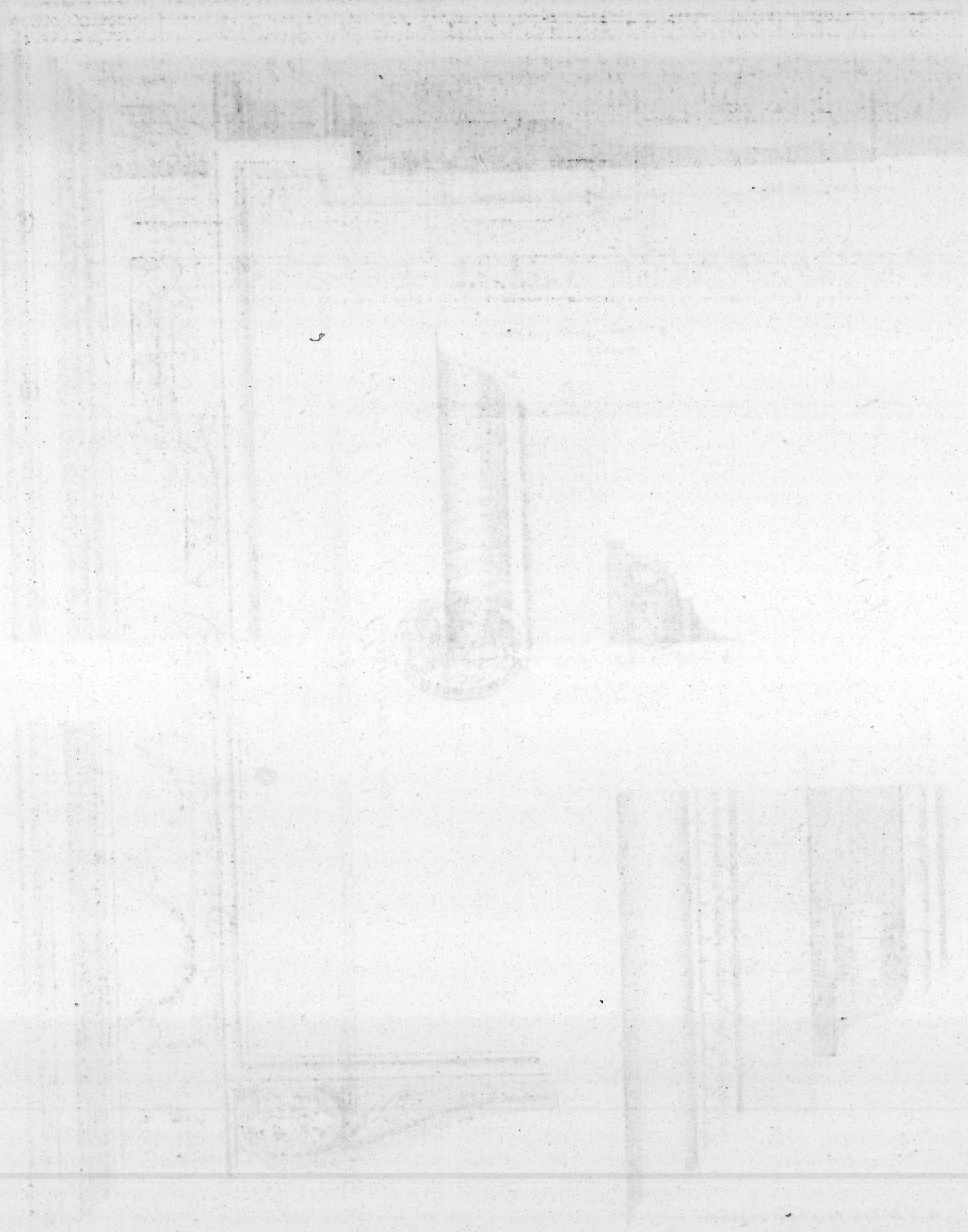


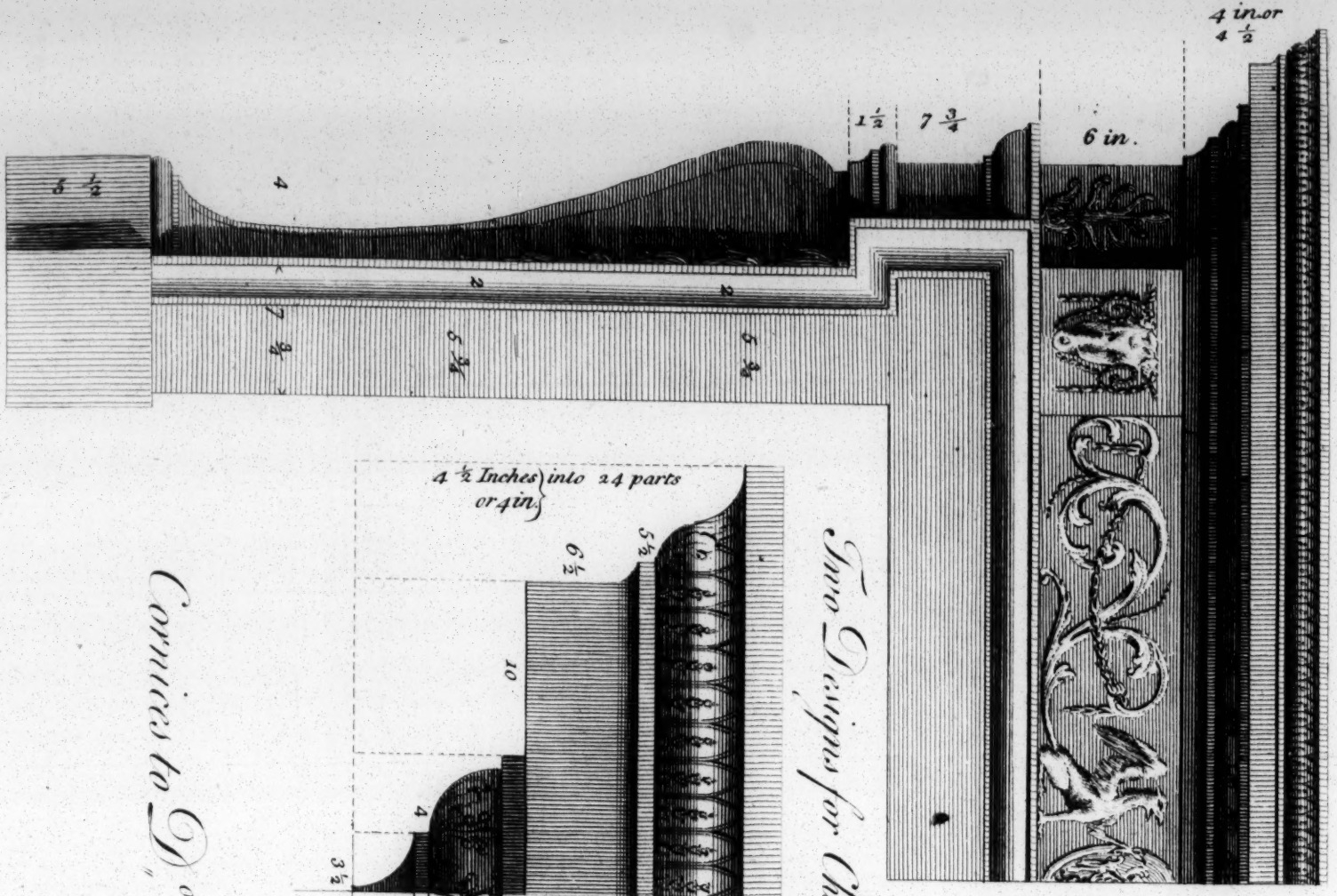
*Part of a Chimney Piece
with Architrave, Frieze and Cornices.*



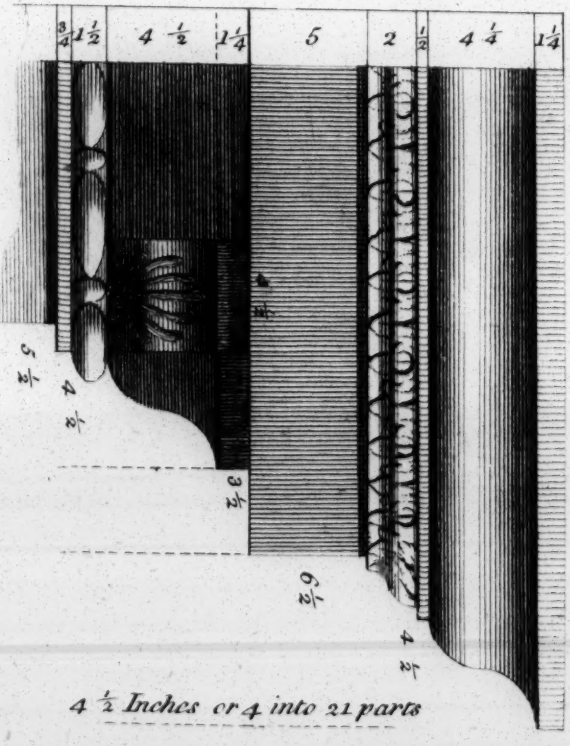
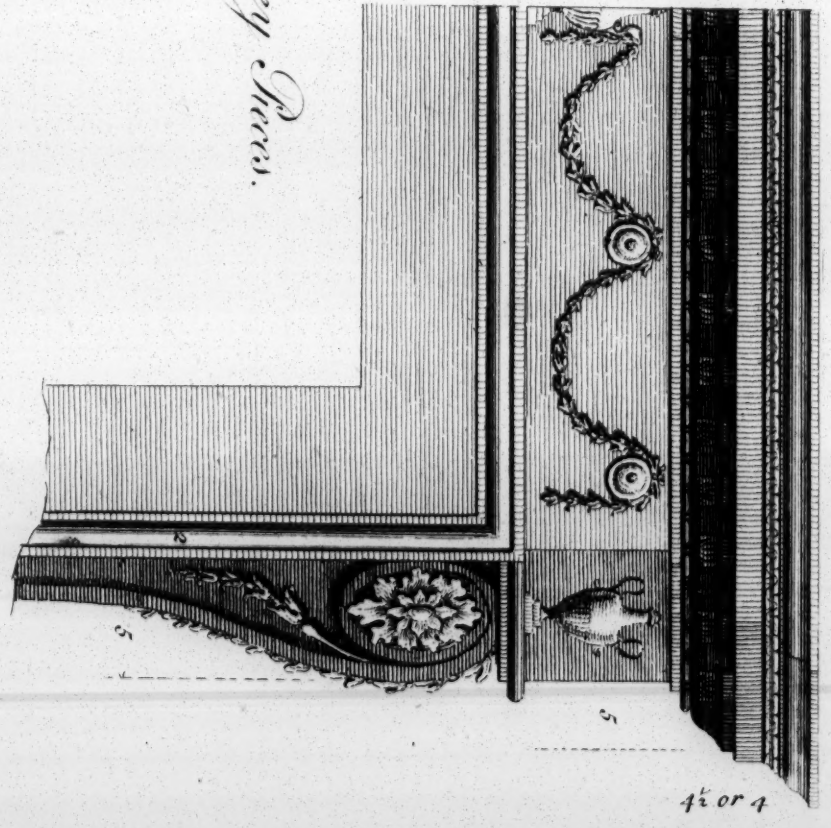
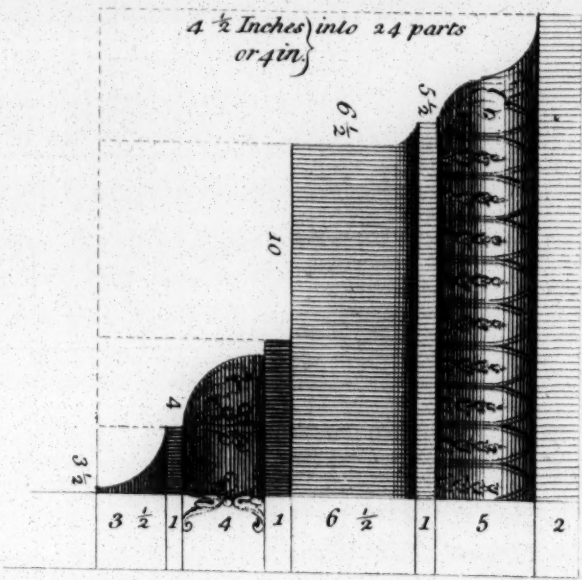
Cornice for a Chimney

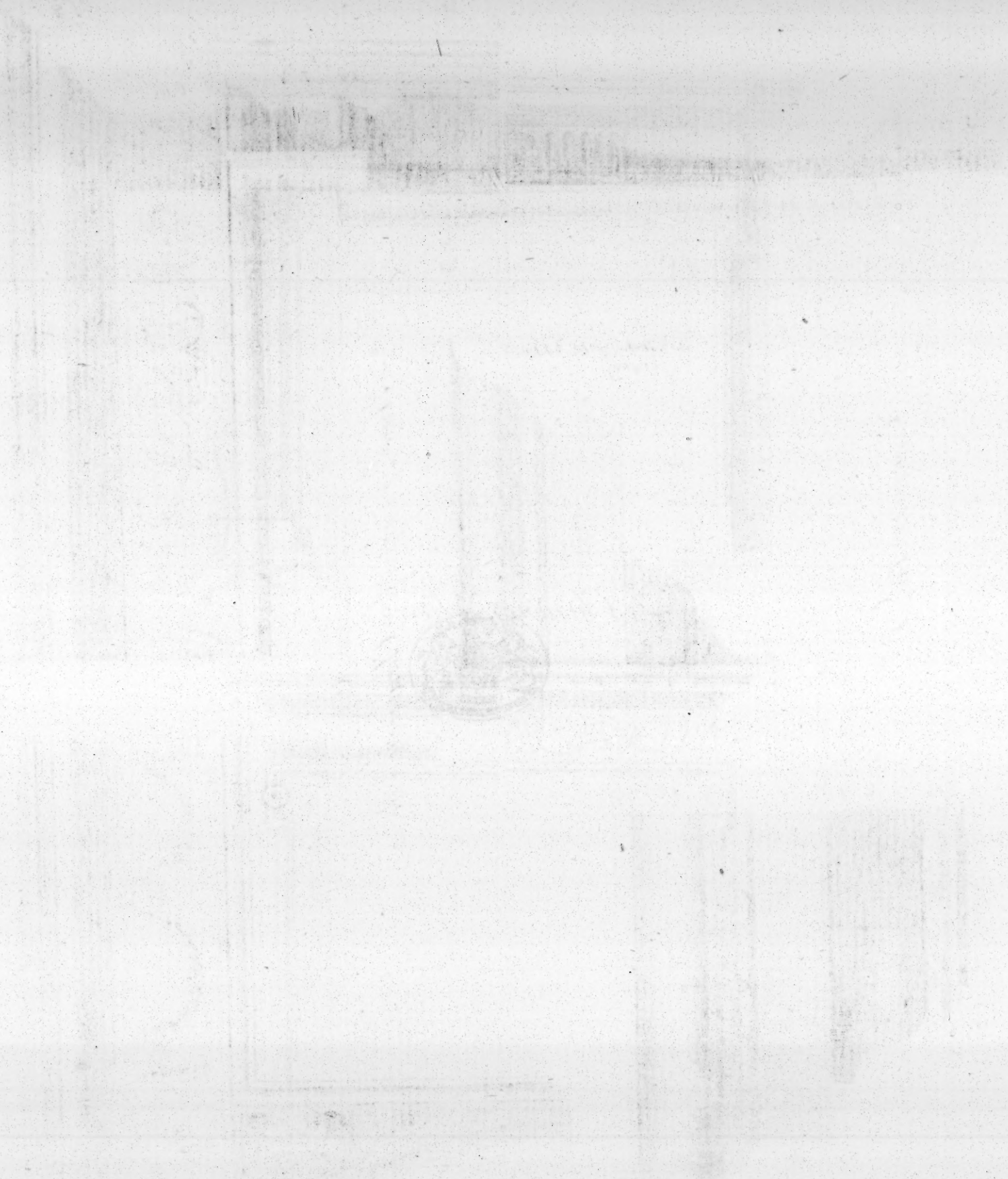


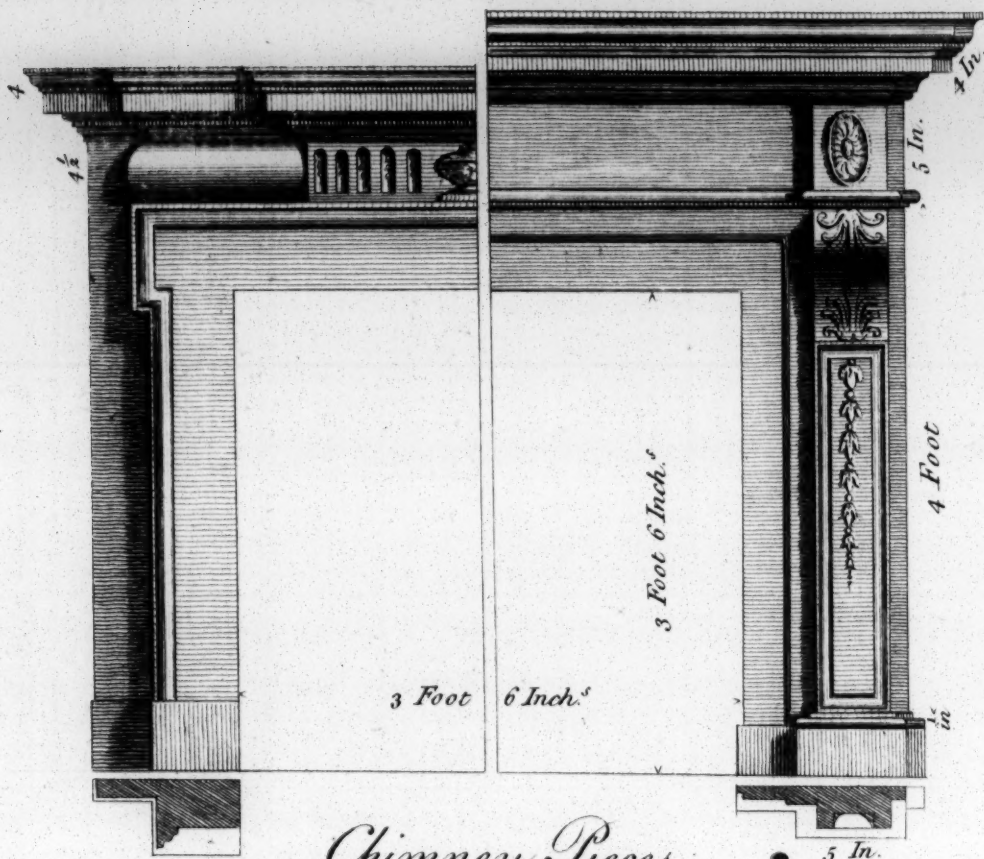




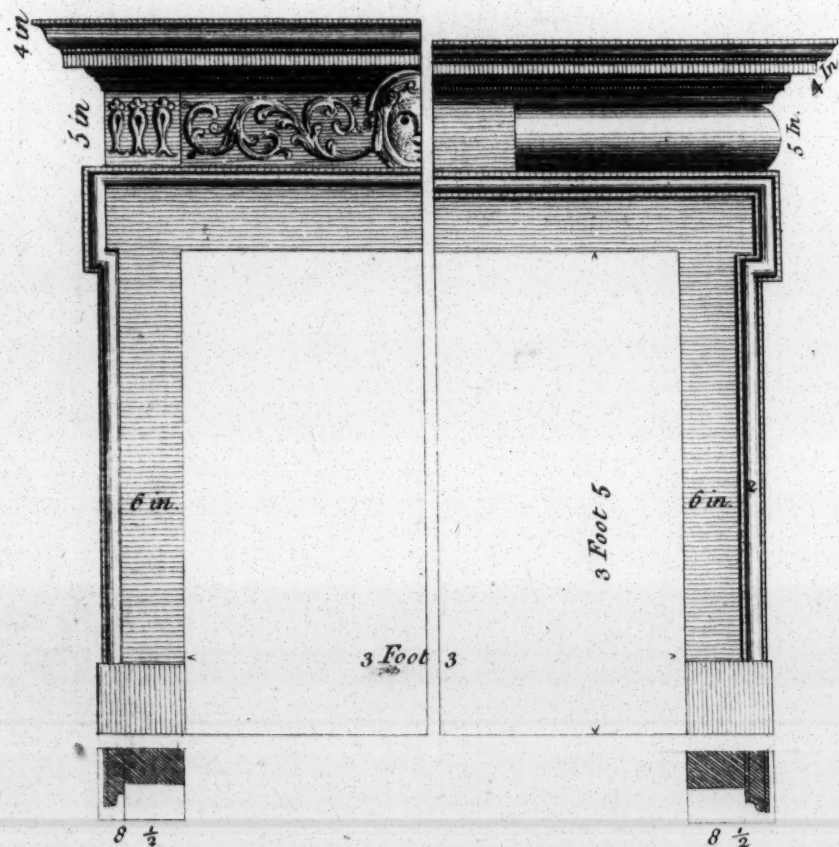
Corrises to D^o

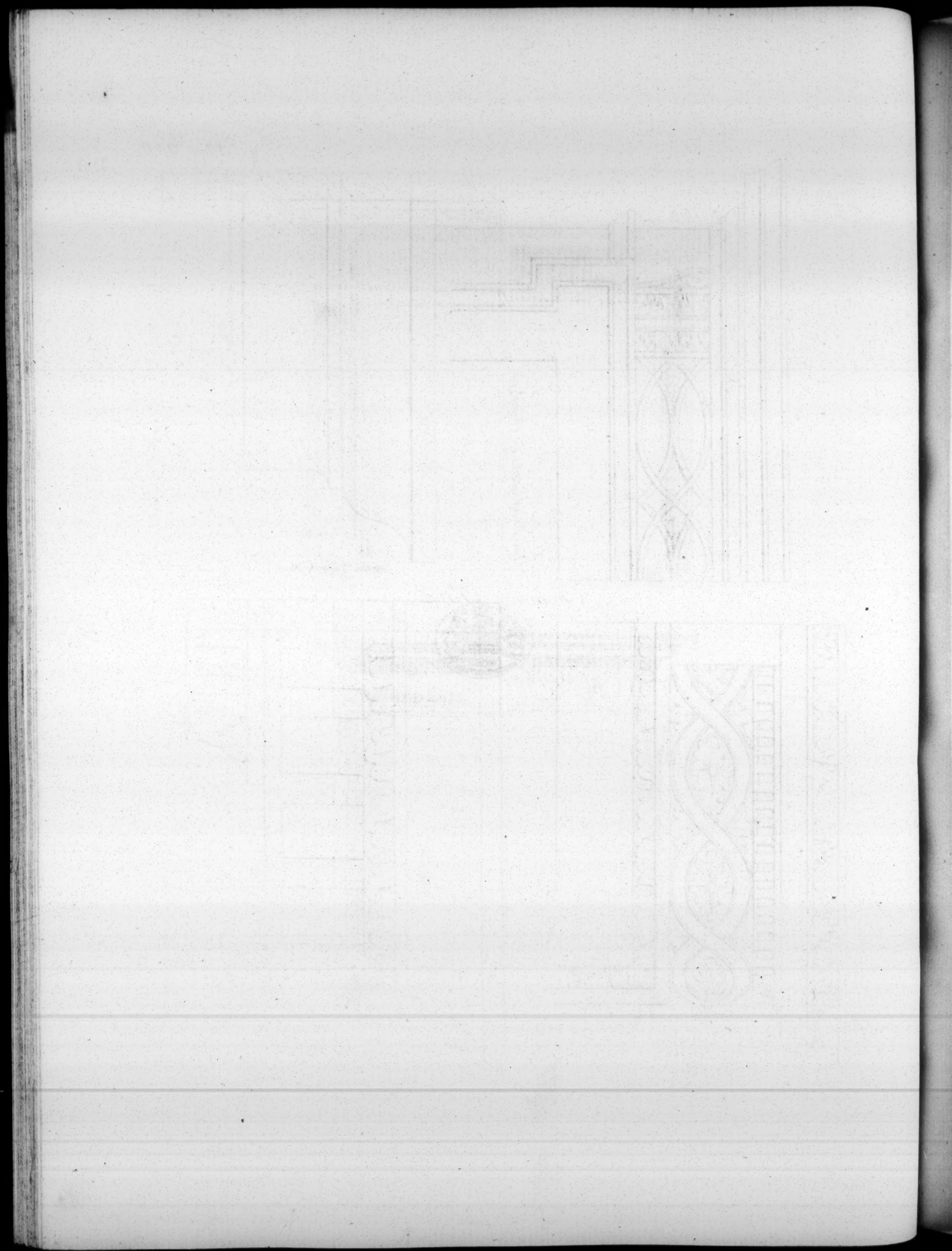


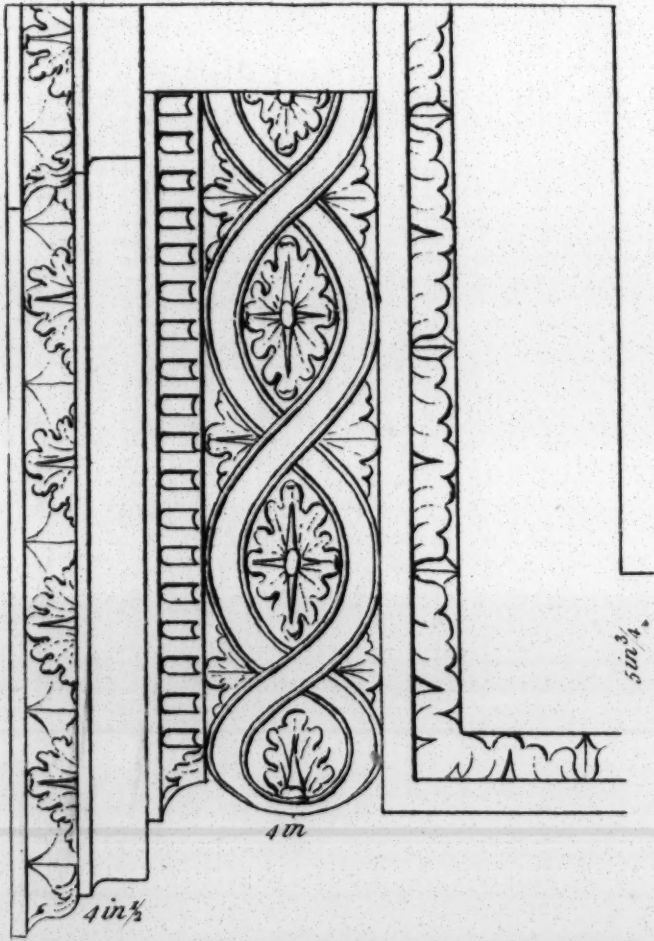




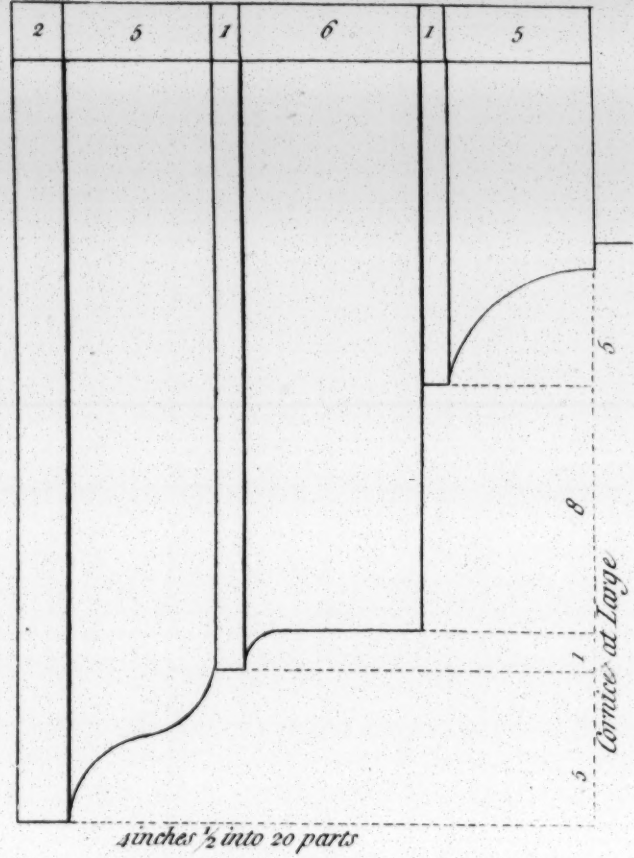
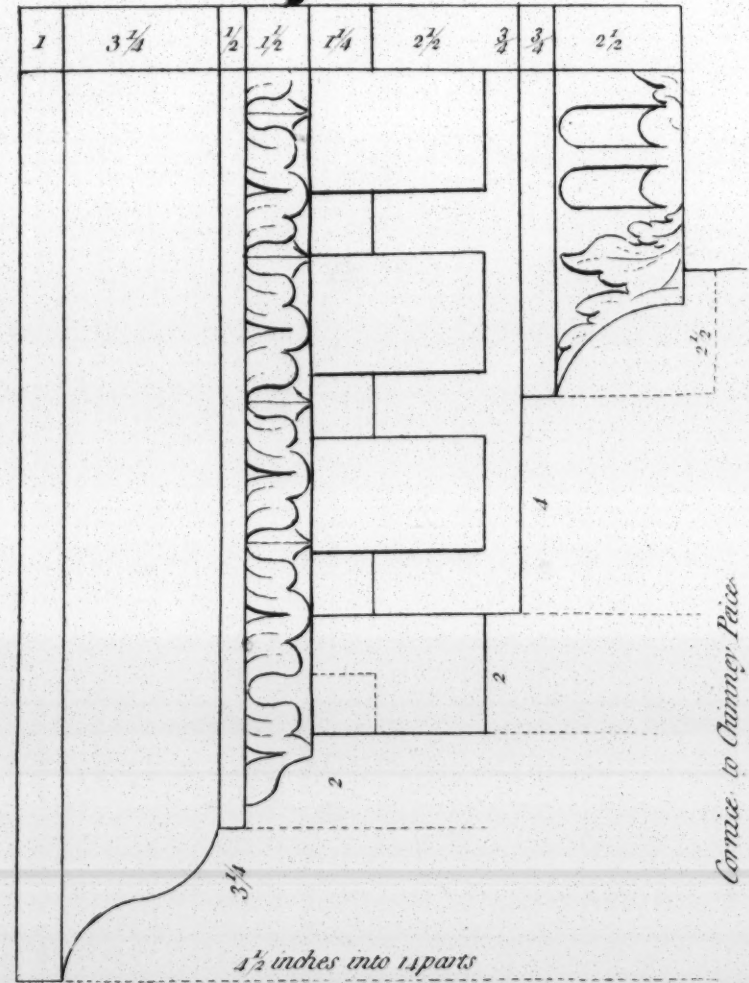
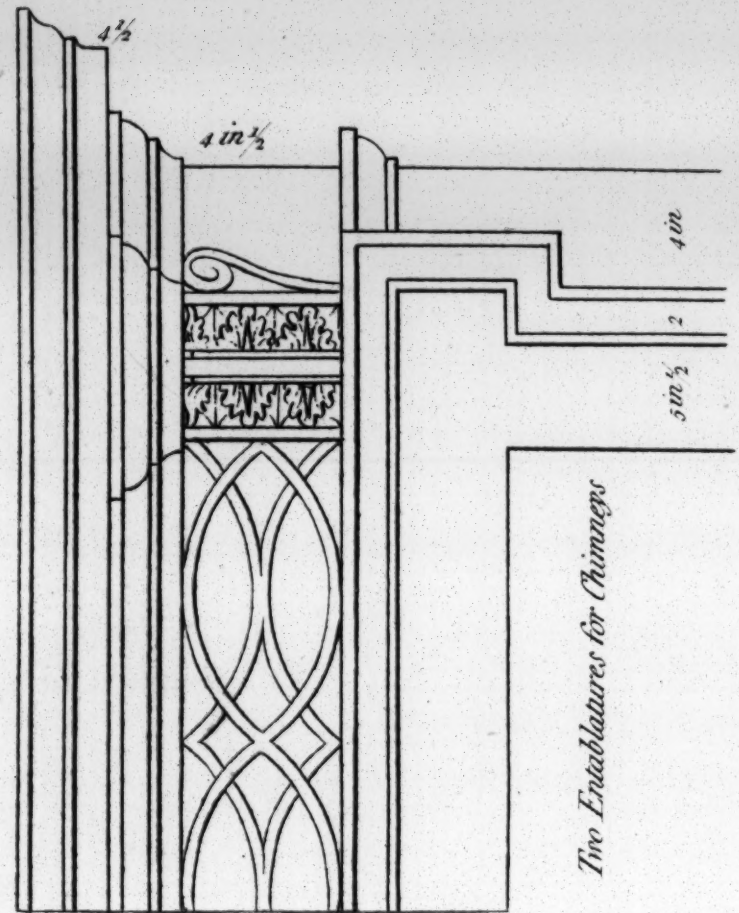
Chimney Pieces.

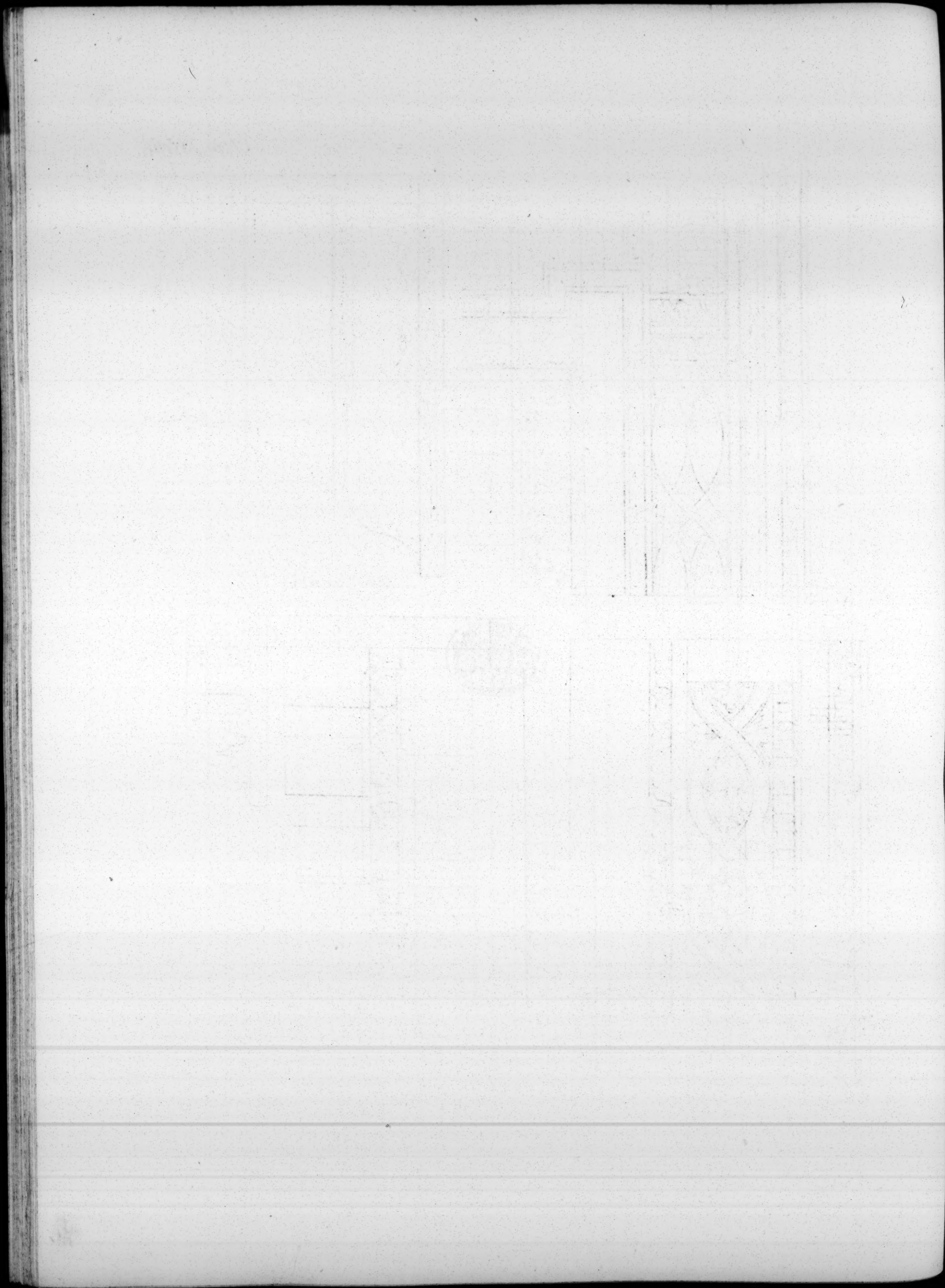


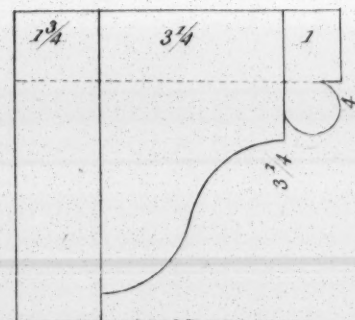
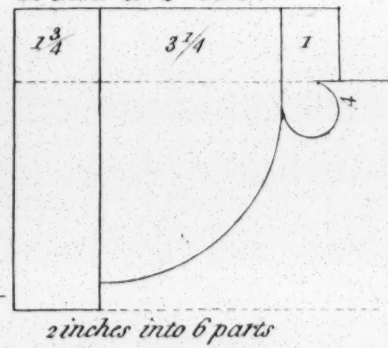
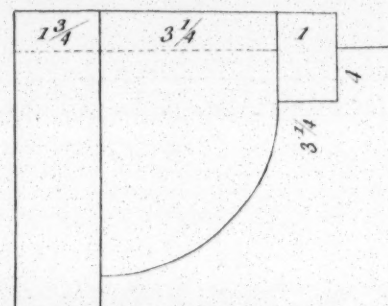
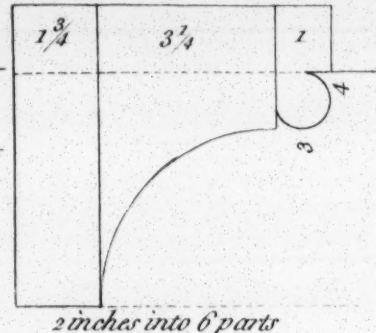
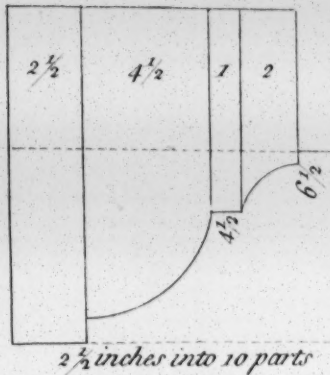
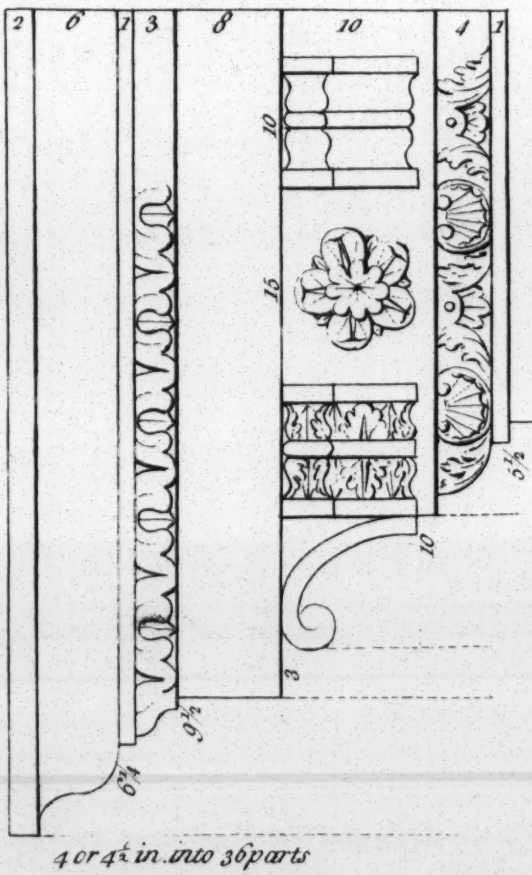
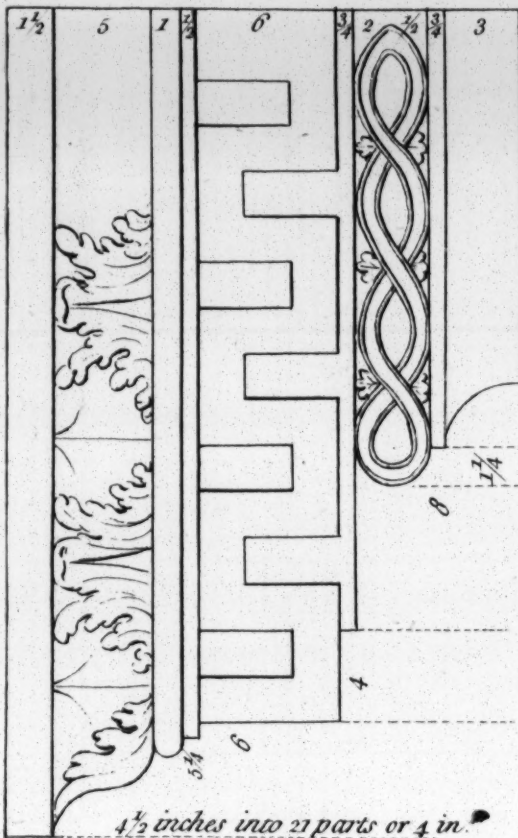
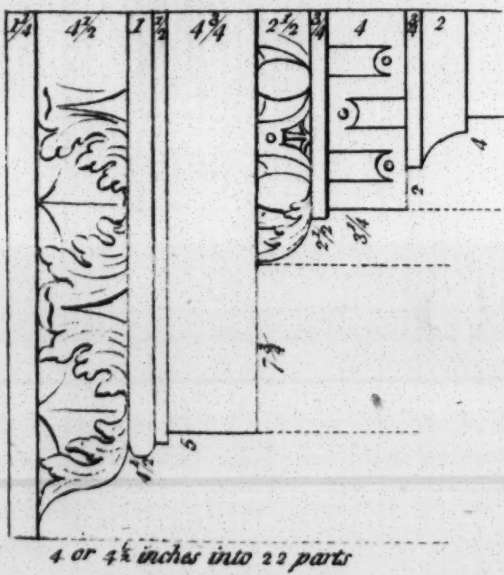
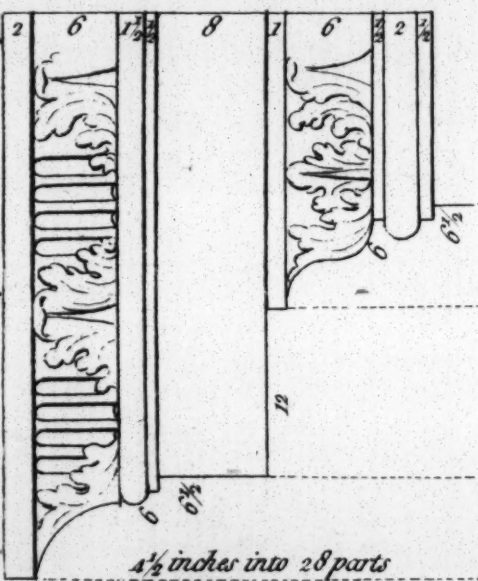
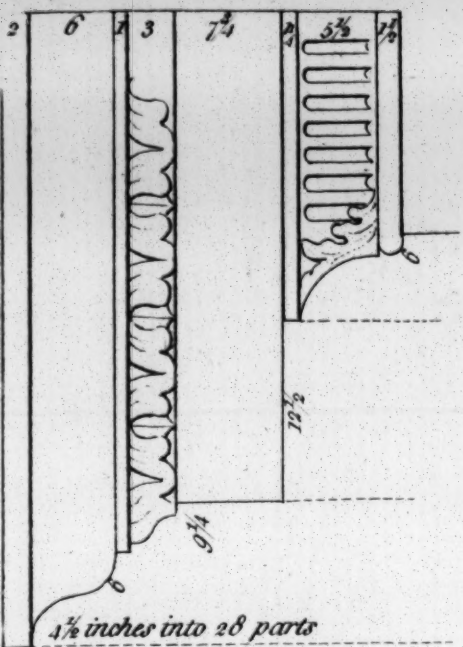


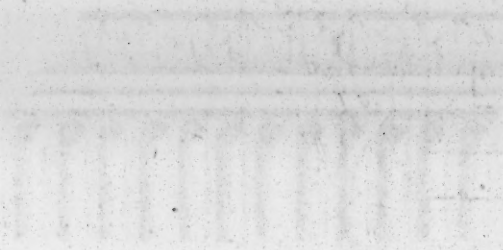


Two Entablatures for Chimneys

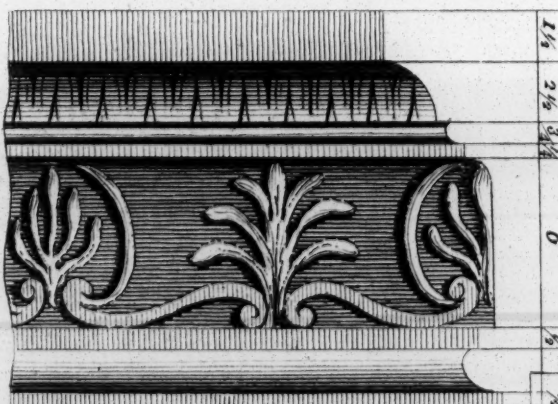
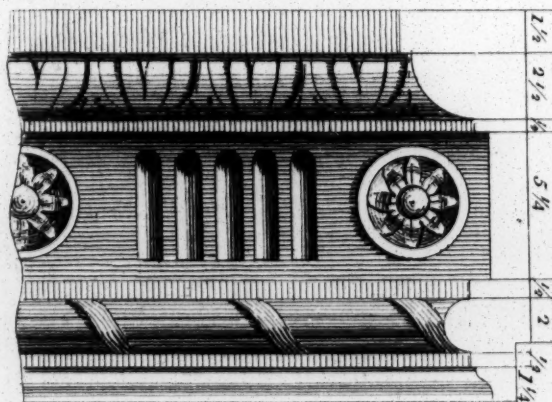
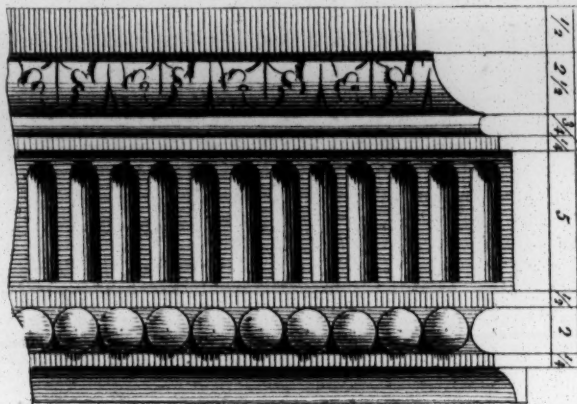






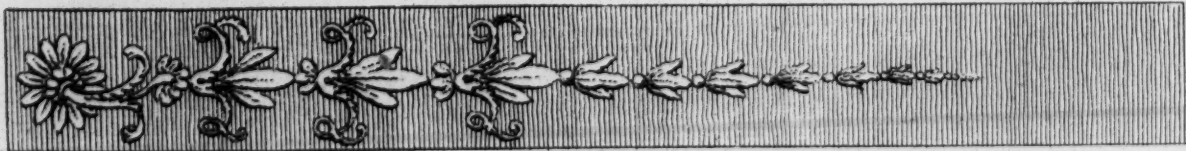
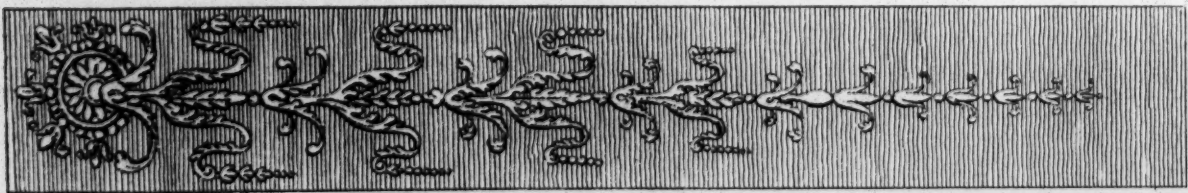
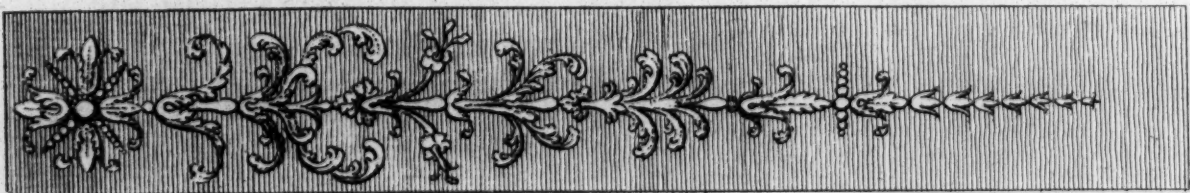
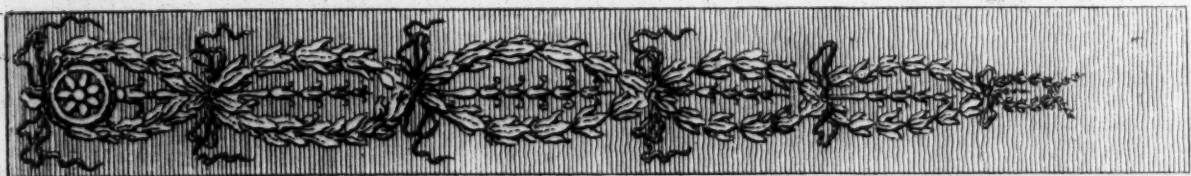


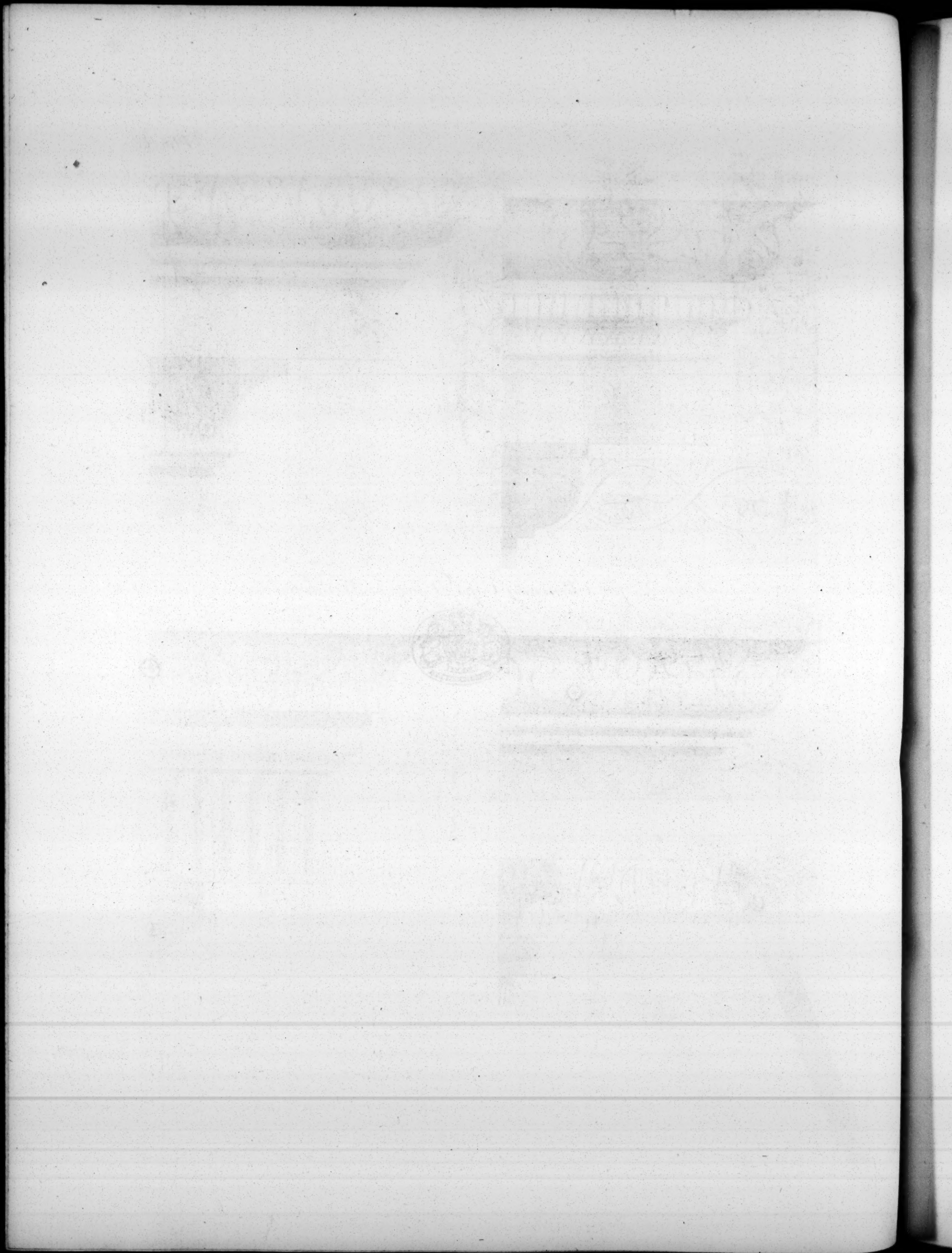
Mouldings for Looking Glass or Picture Frames.

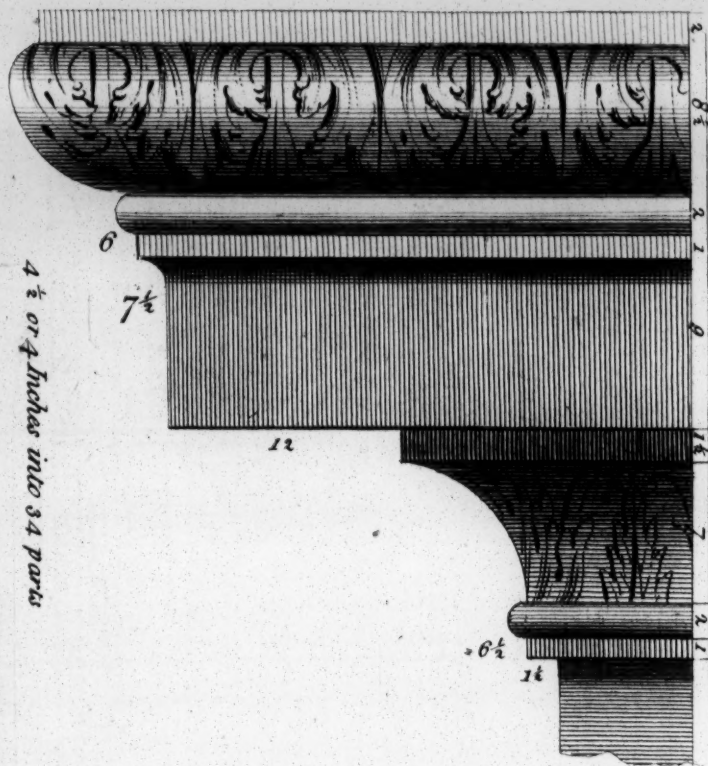
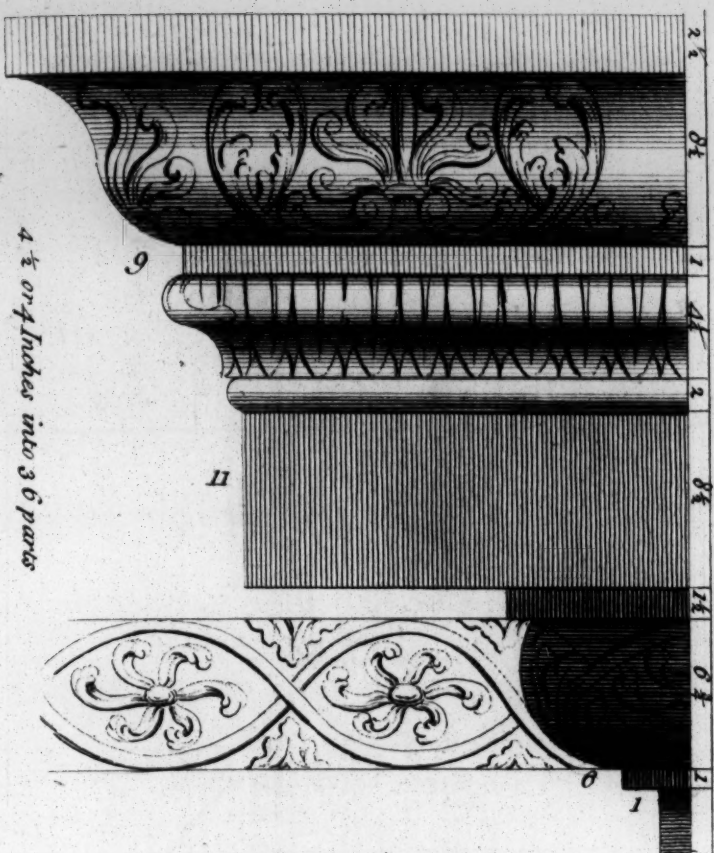


Each frame into 14 Parts.

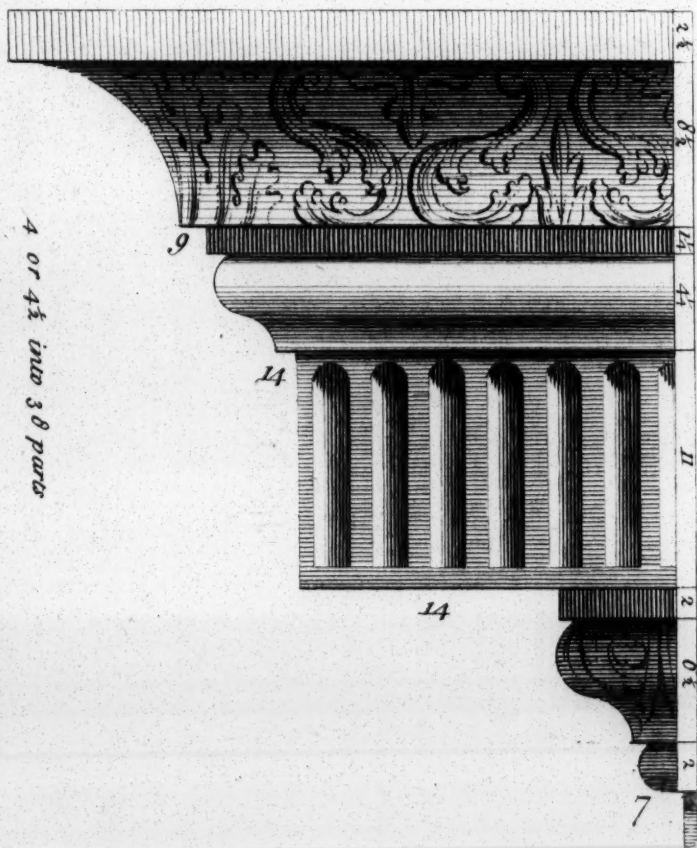
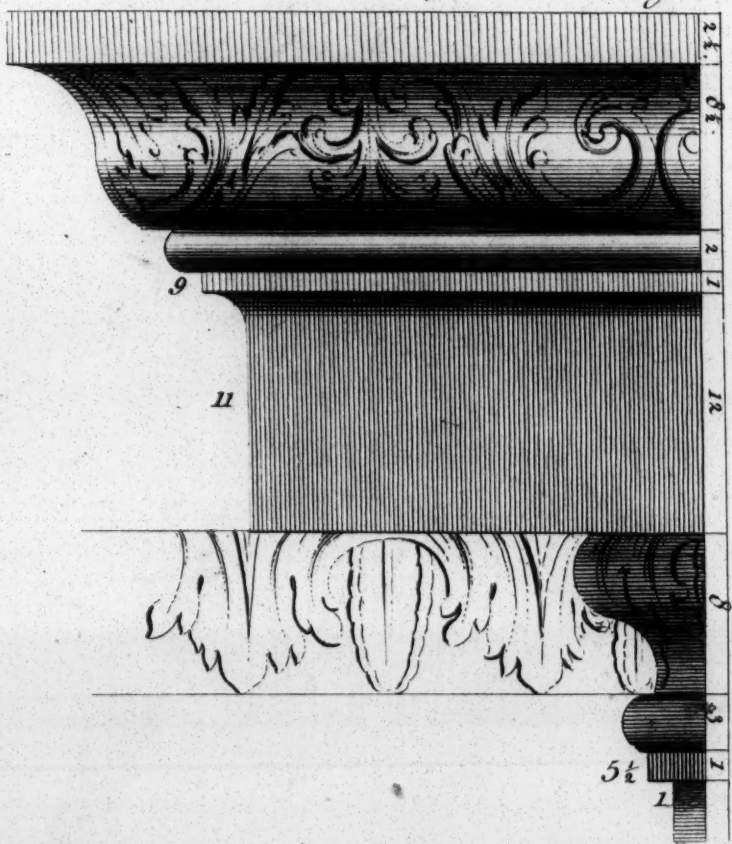


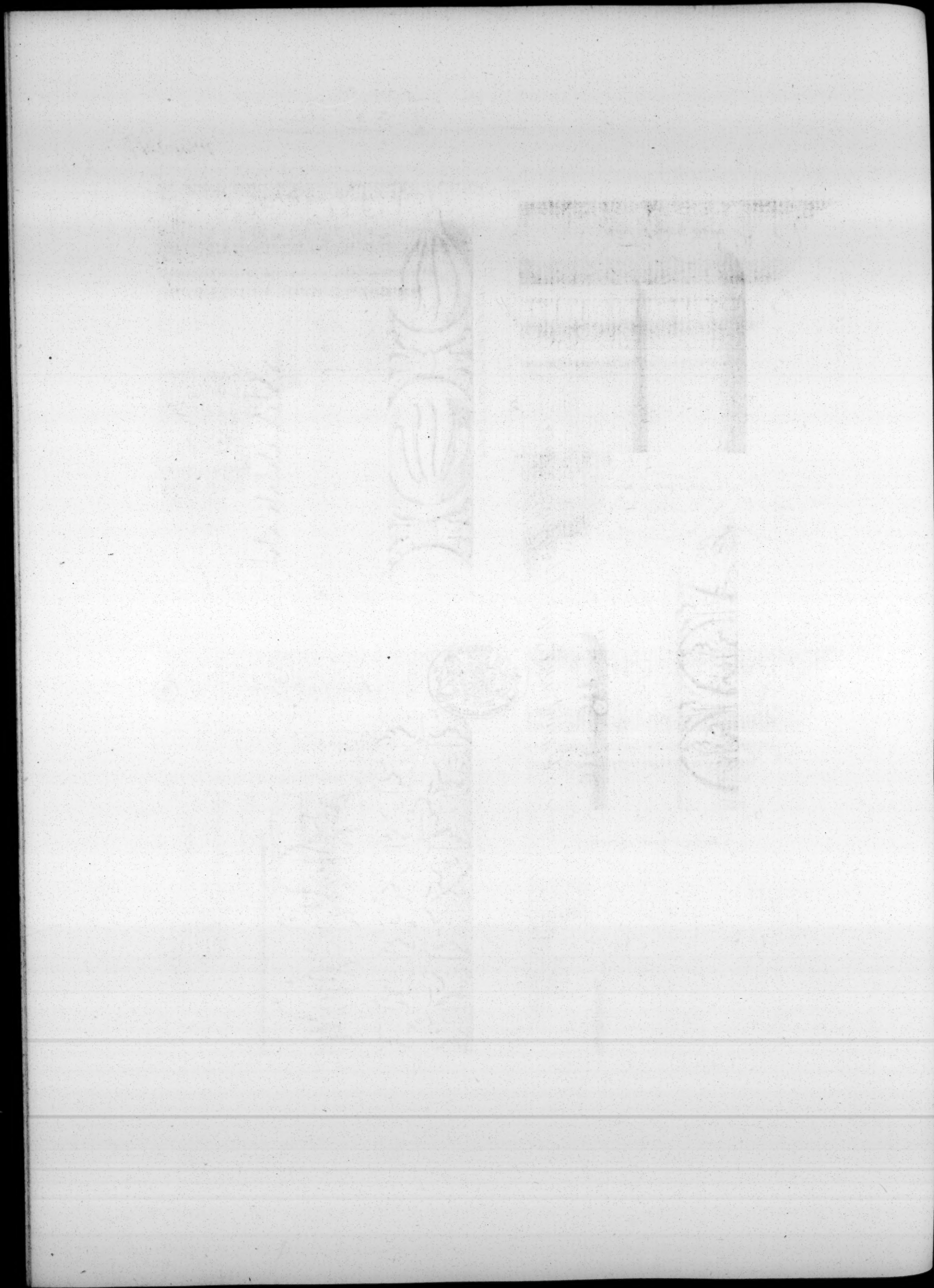


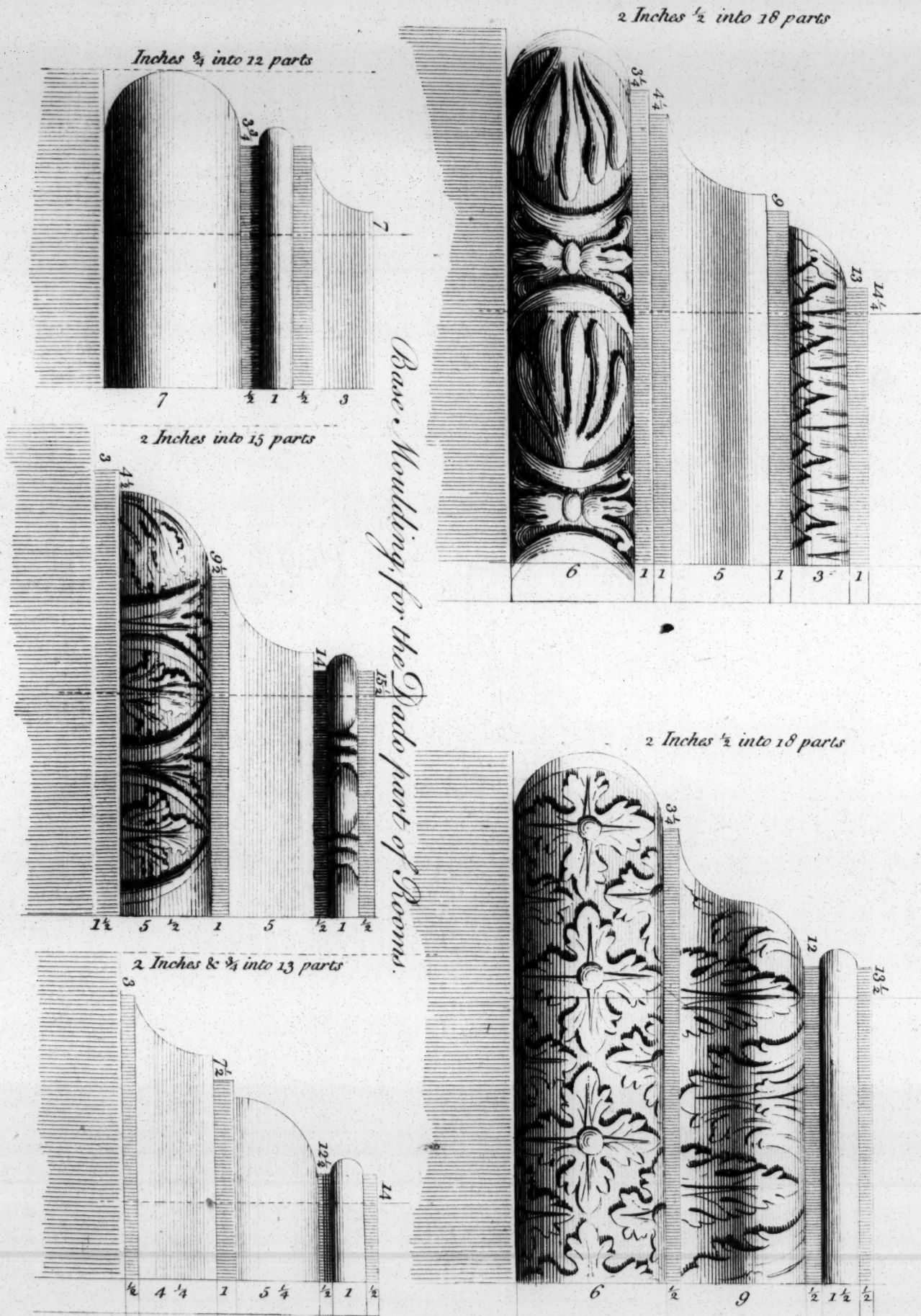




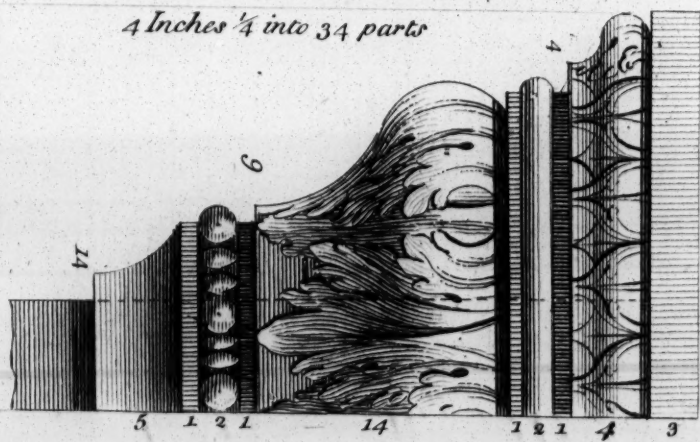
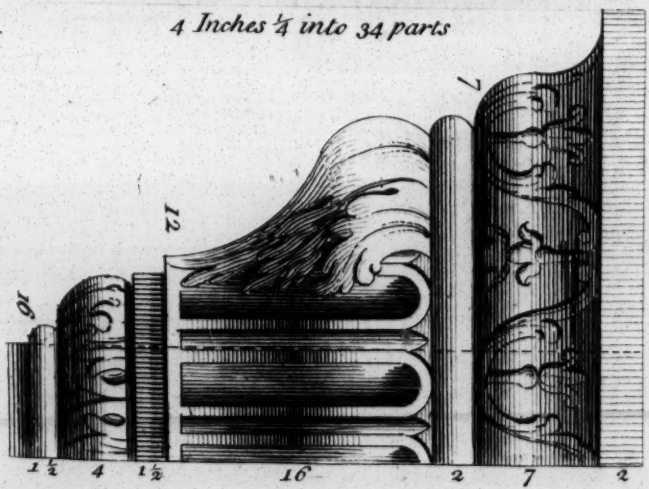
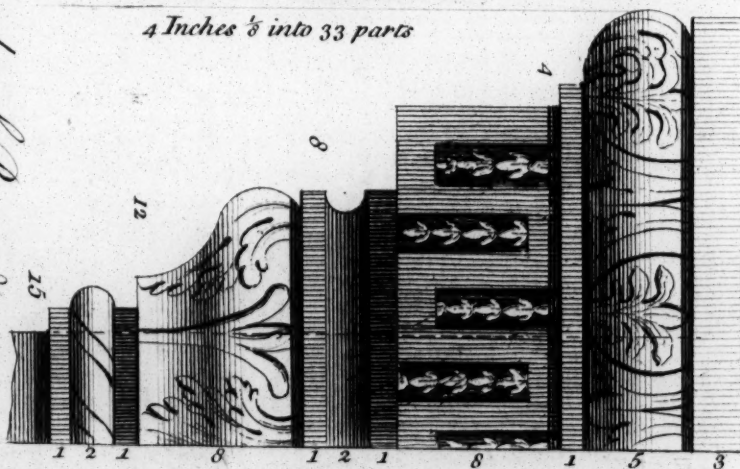
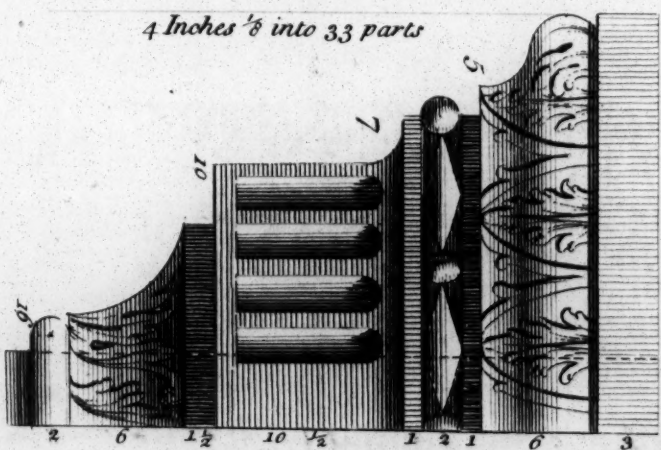
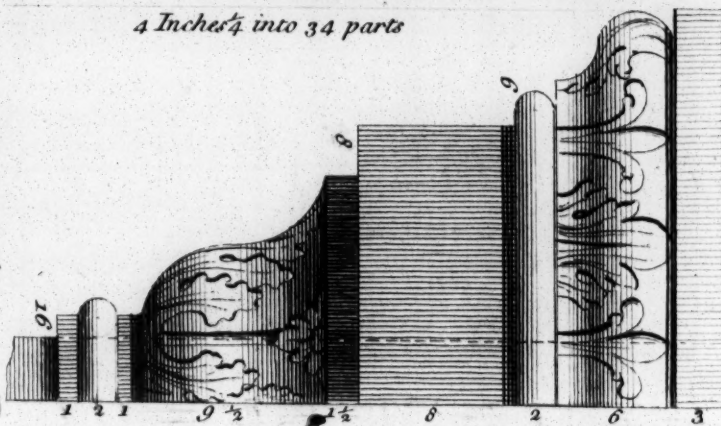
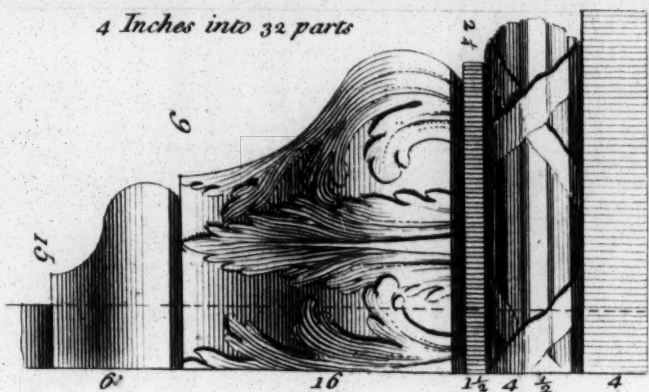
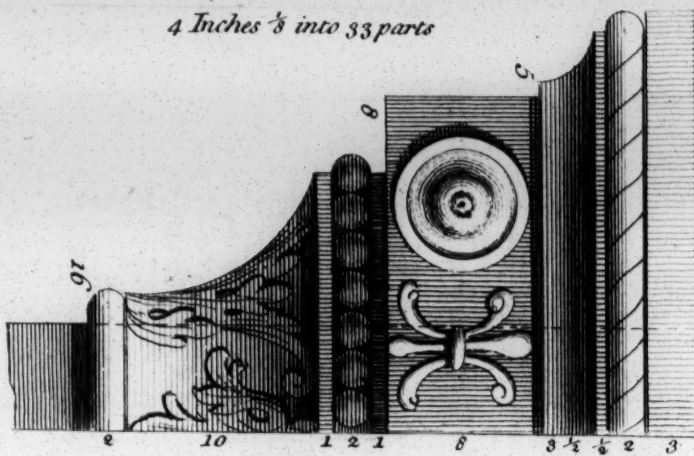
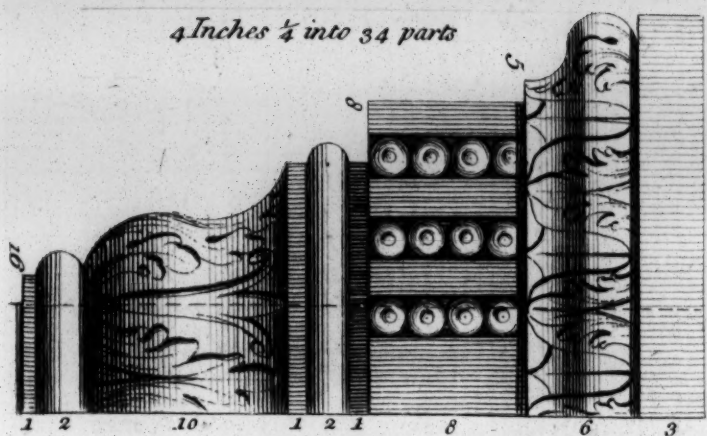
Cornices for Chimney Caps Doors or Windows &c.











Subtances for the Dado of Rooms &c.

WATER

1111

36



1875

1111

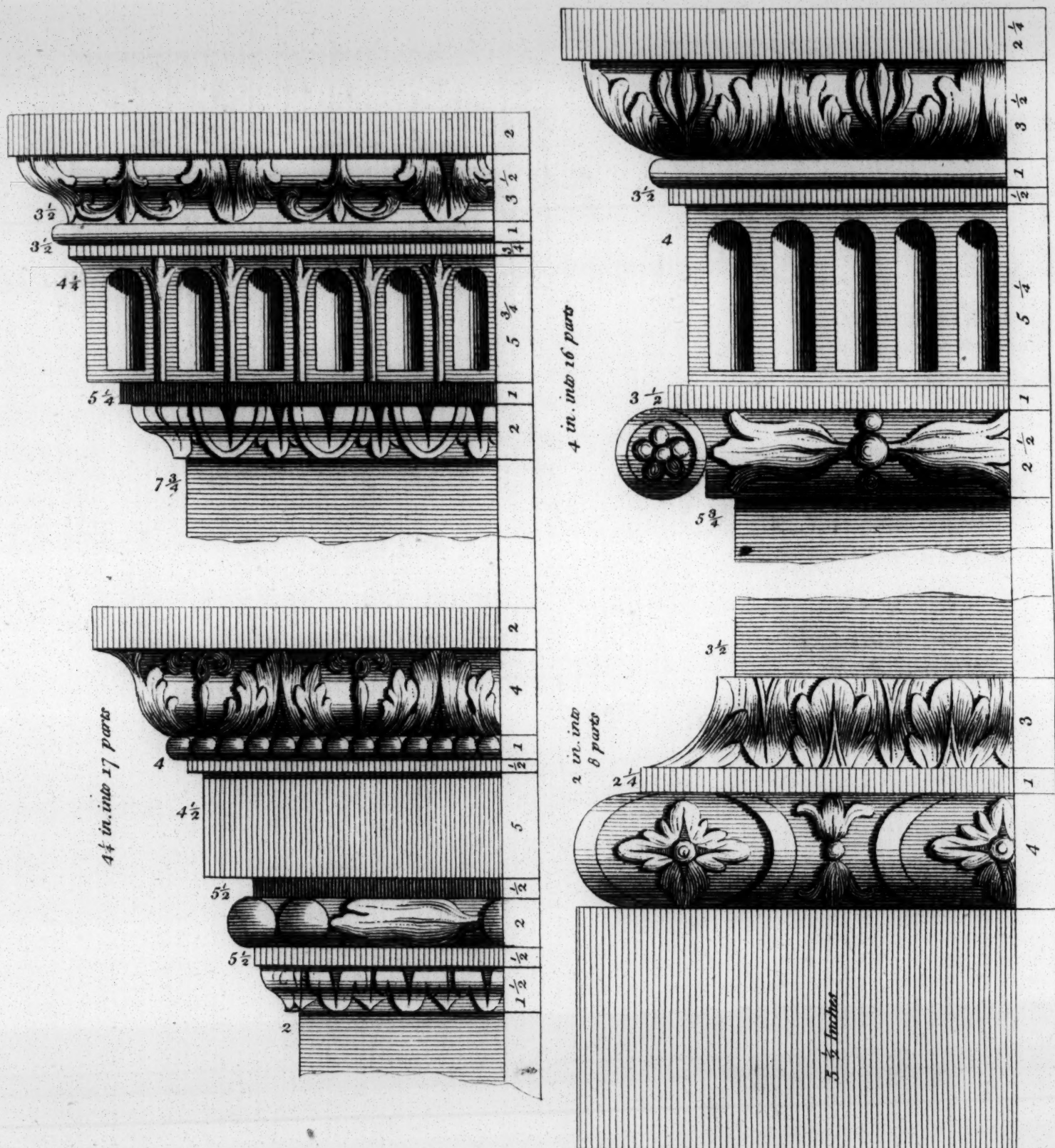
1111

1111

1111

1111

Base & Sub-base for Rooms.



RECEIVED

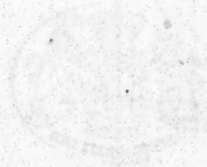
1111

1111

RECEIVED

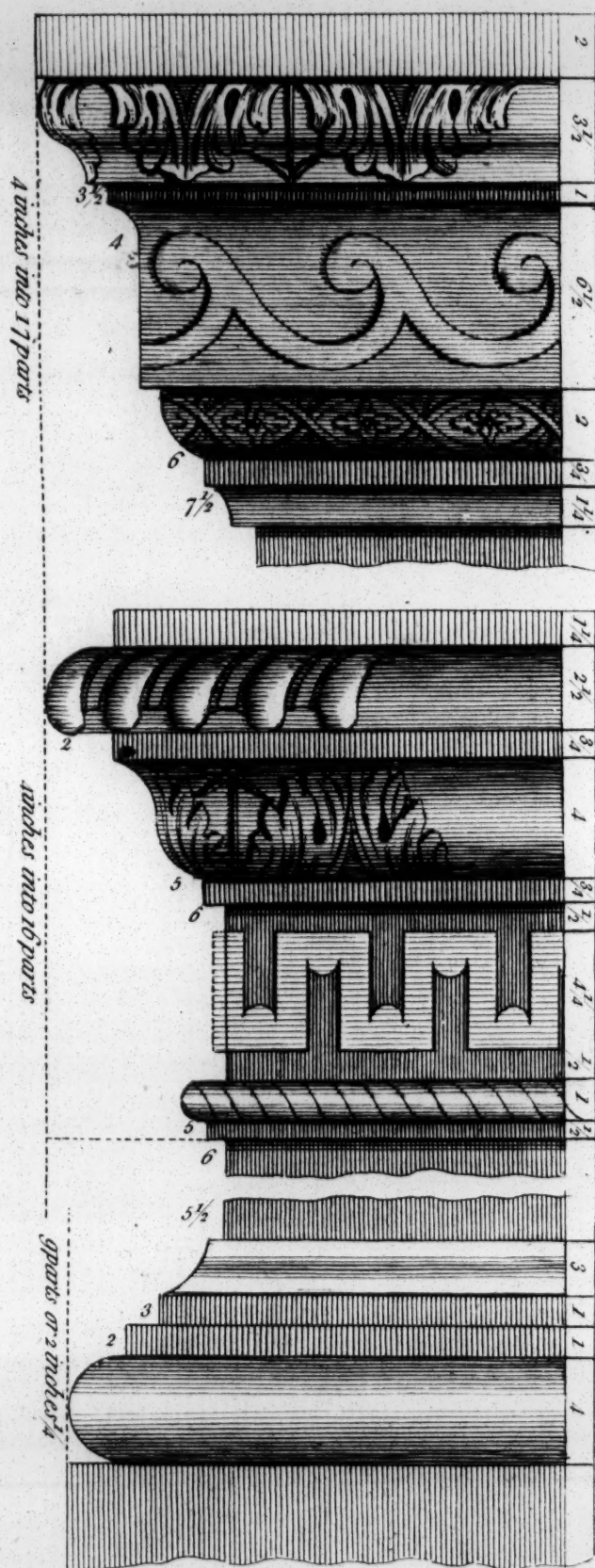
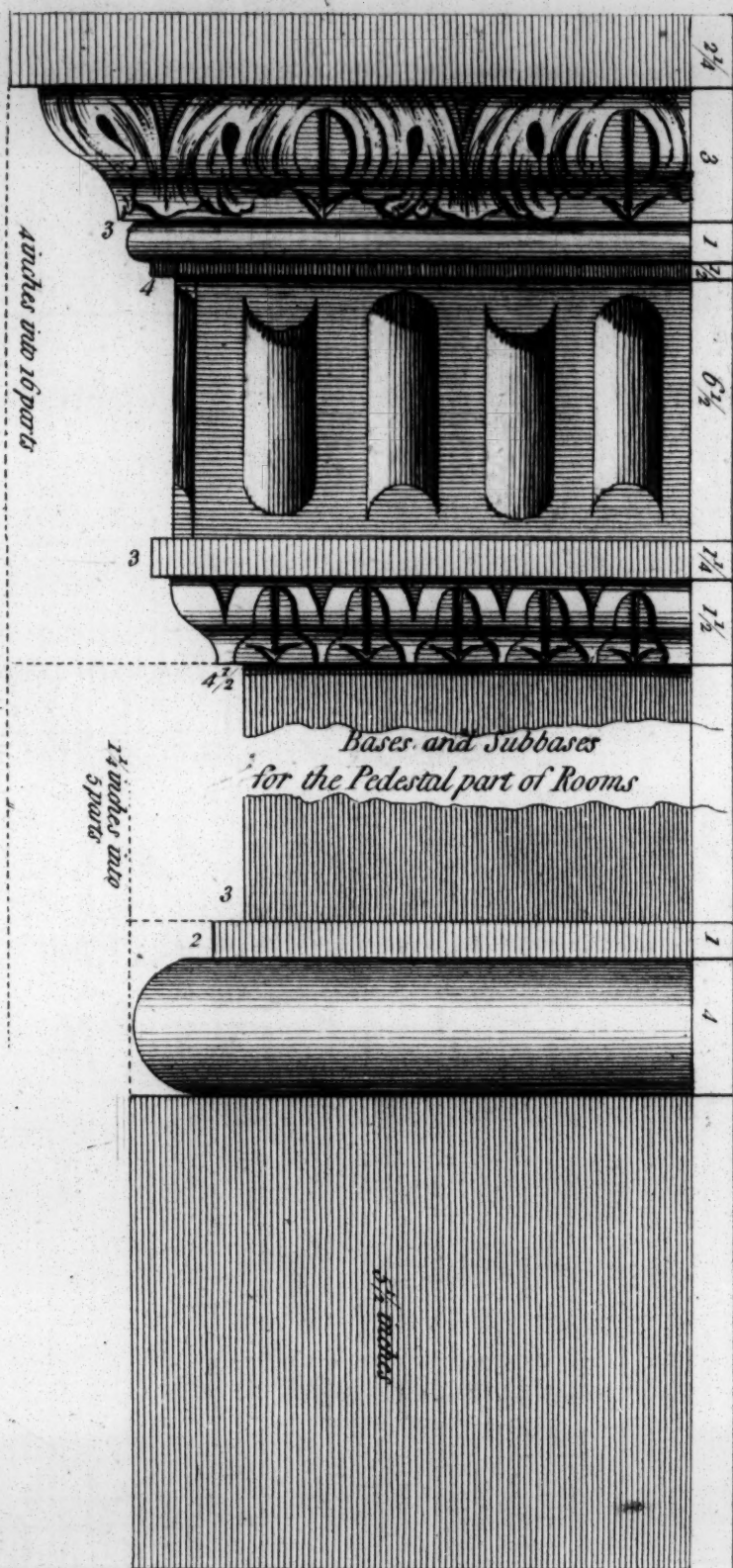
1111

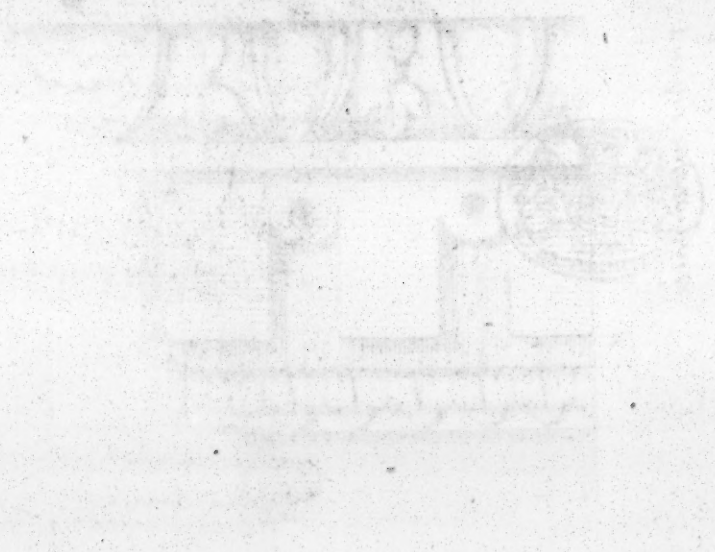
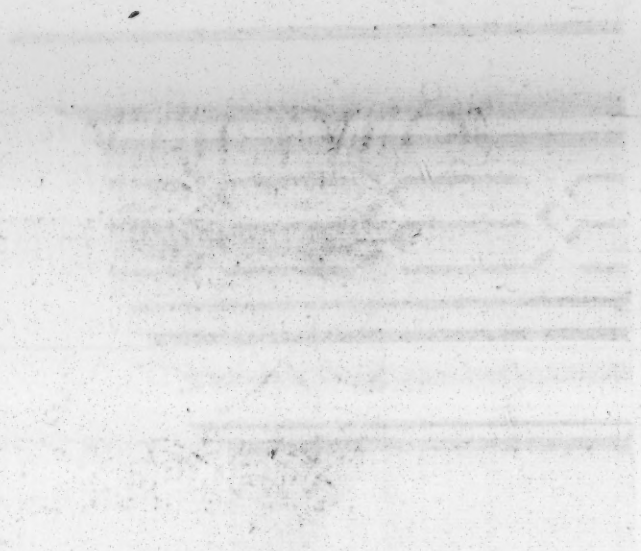
1111



RECEIVED

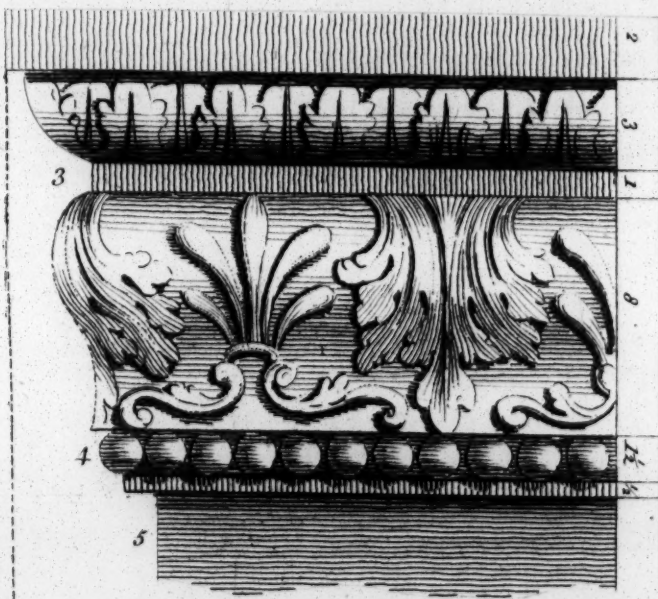
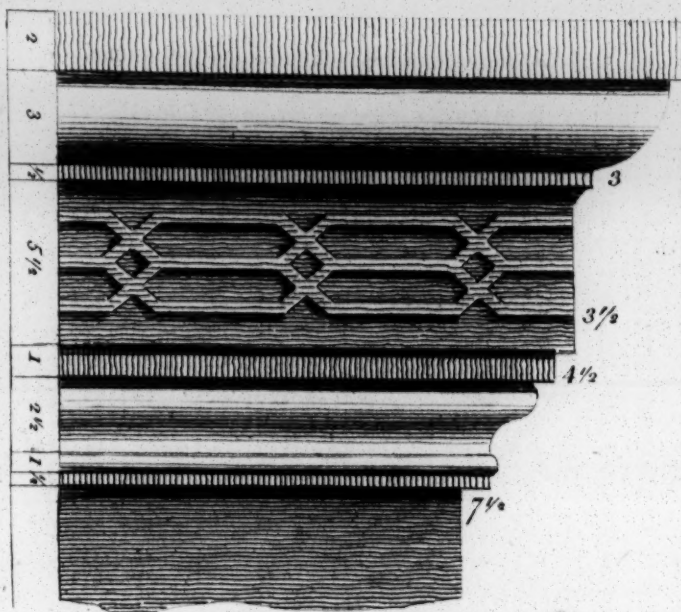
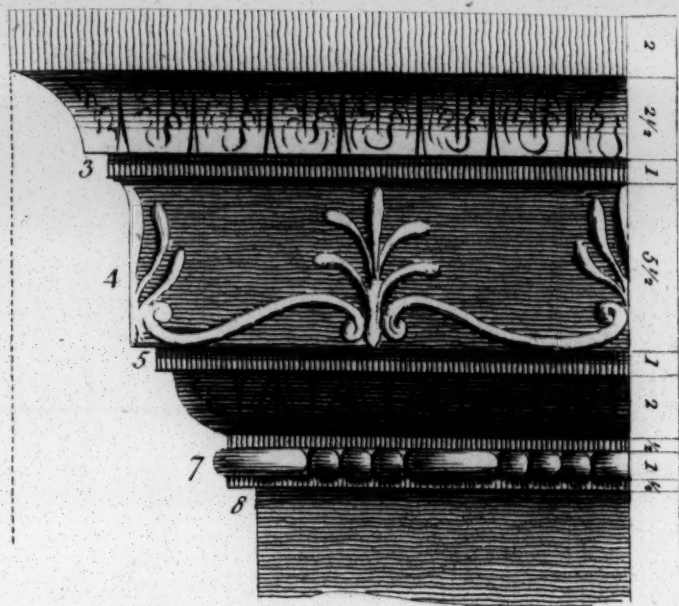
RECEIVED



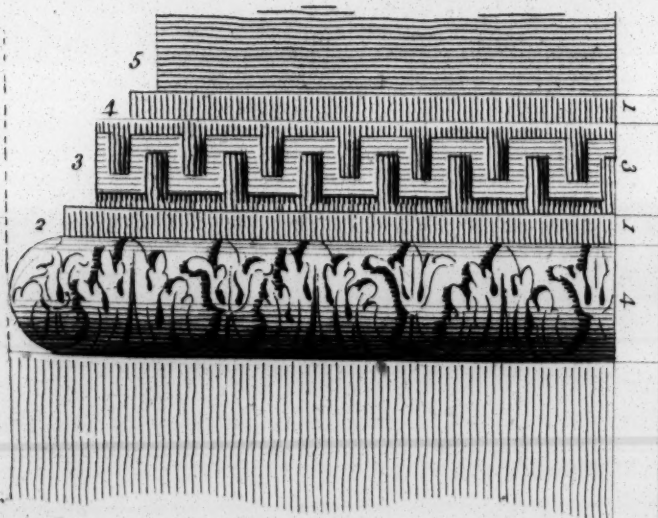
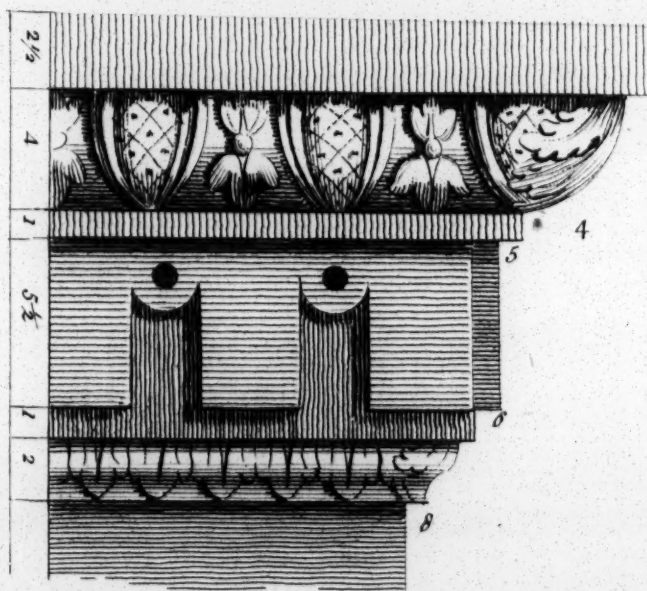


Bases & Sub-basis for Rooms.

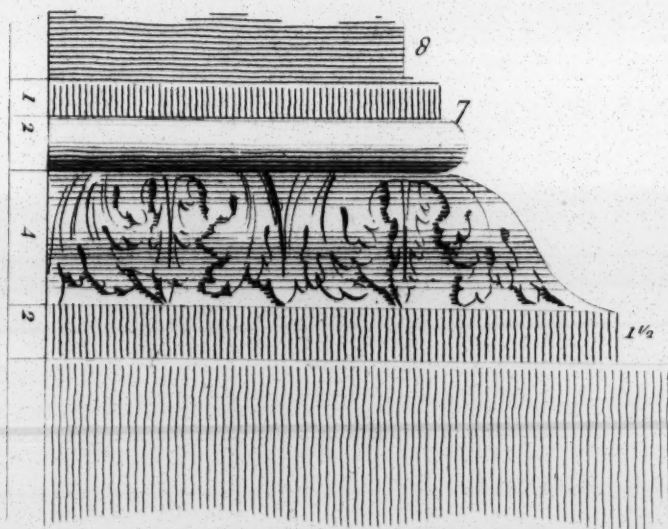
Plate LVI.



4 inches into 16 parts



*2 1/4 inches into 9 parts
2 inches ditto*

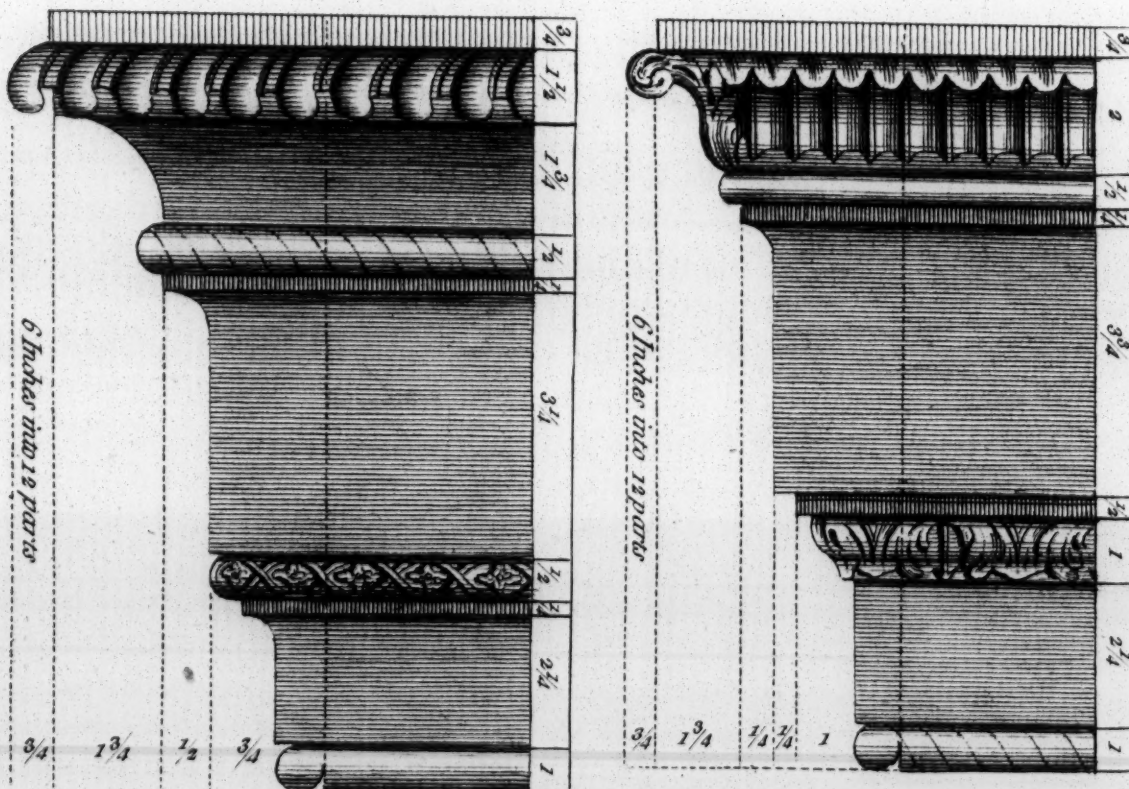
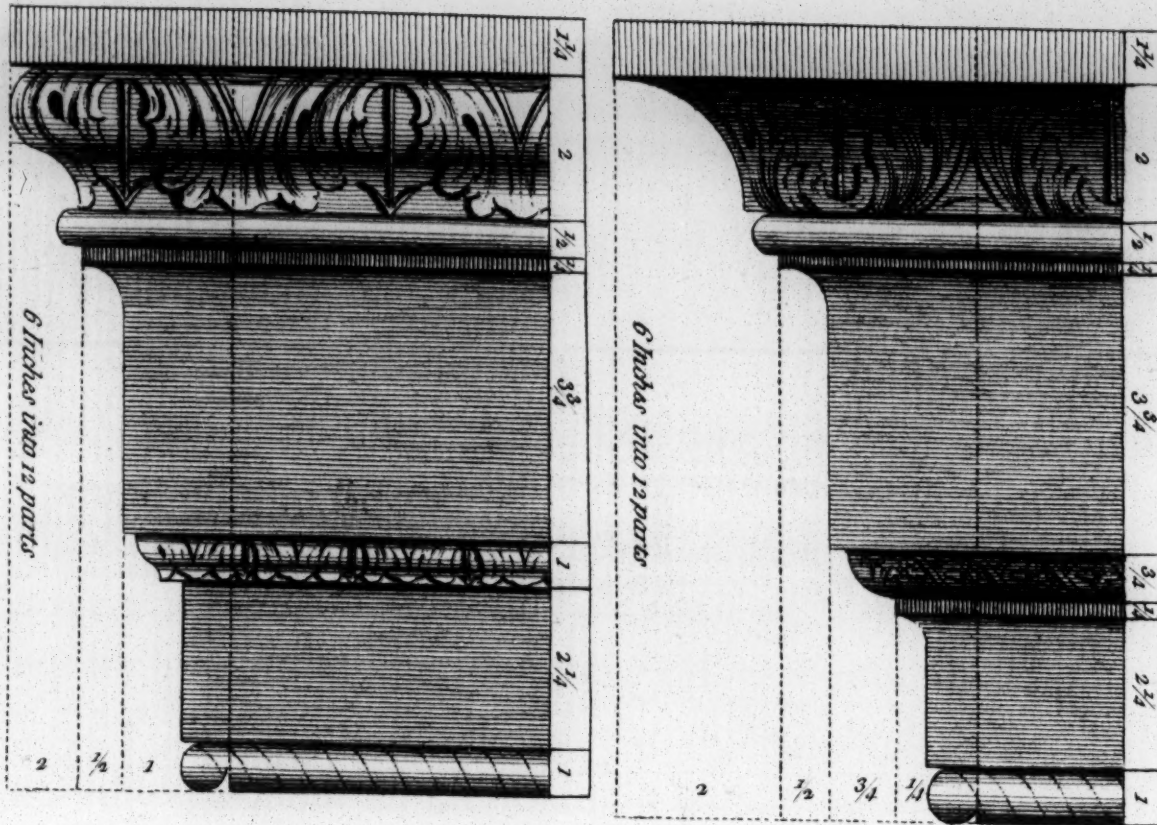


THE
OFFICE OF THE
SHERIFF
COUNTY OF
SHERBORN
MASSACHUSETTS
JANUARY 1880

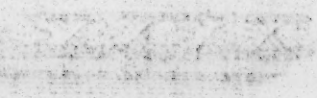
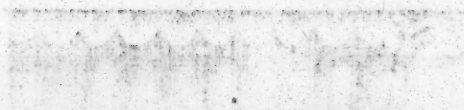
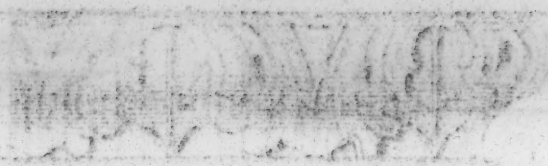
THE
OFFICE OF THE
SHERIFF
COUNTY OF
SHERBORN
MASSACHUSETTS
JANUARY 1880

THE
OFFICE OF THE
SHERIFF
COUNTY OF
SHERBORN
MASSACHUSETTS
JANUARY 1880

THE
OFFICE OF THE
SHERIFF
COUNTY OF
SHERBORN
MASSACHUSETTS
JANUARY 1880



Architraves for Doors Windows &c. at large.



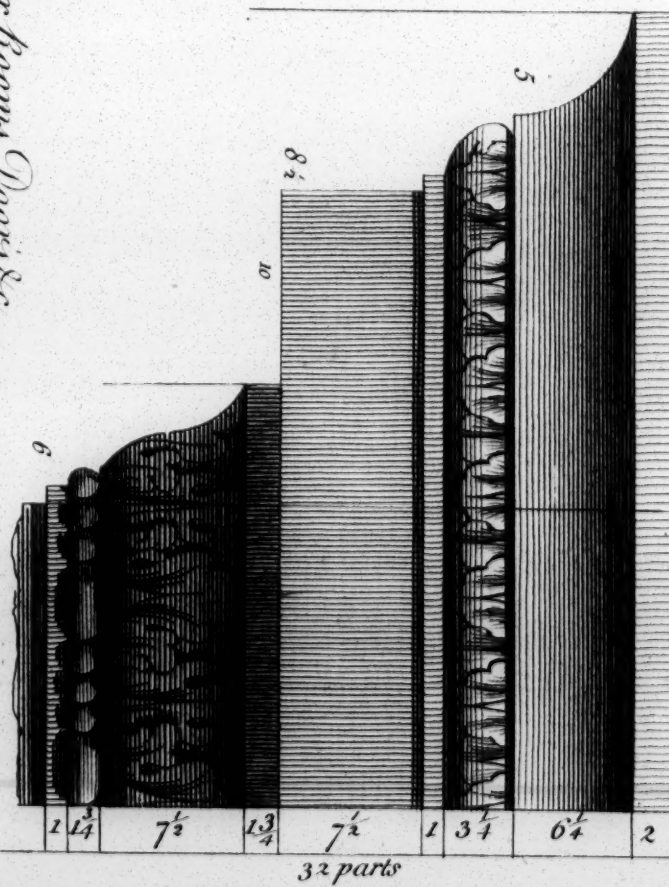
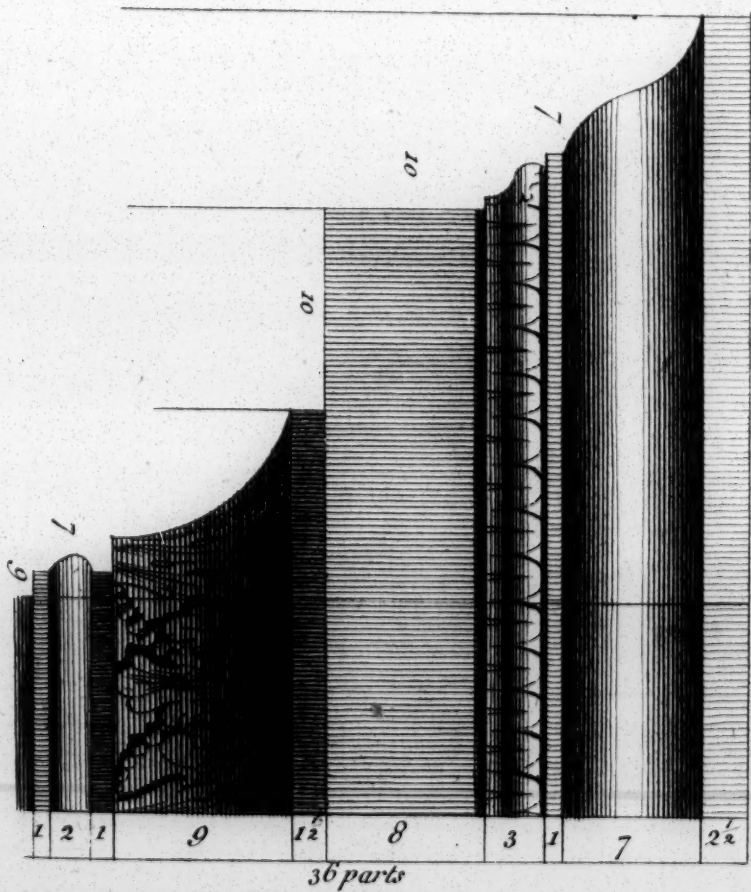
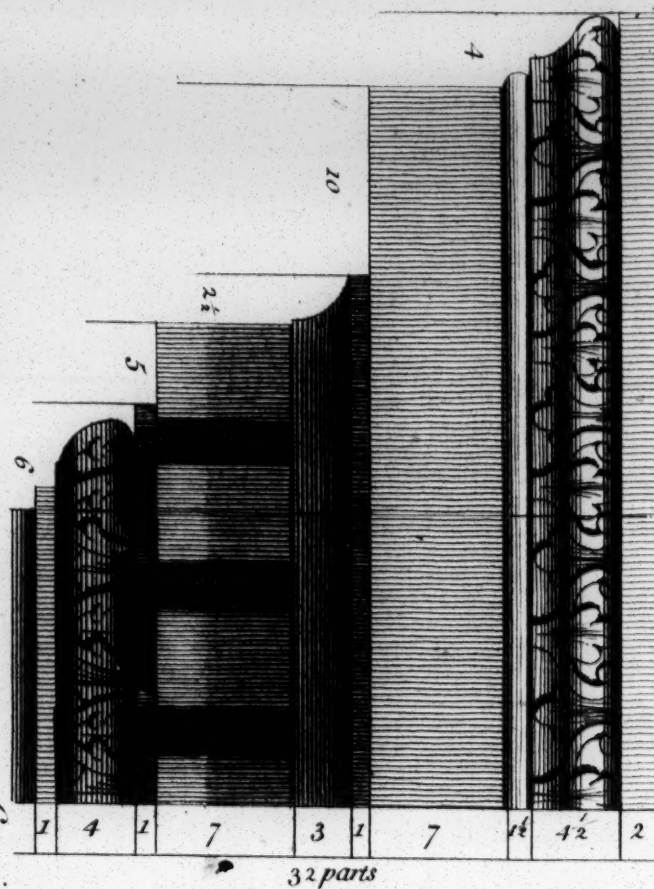
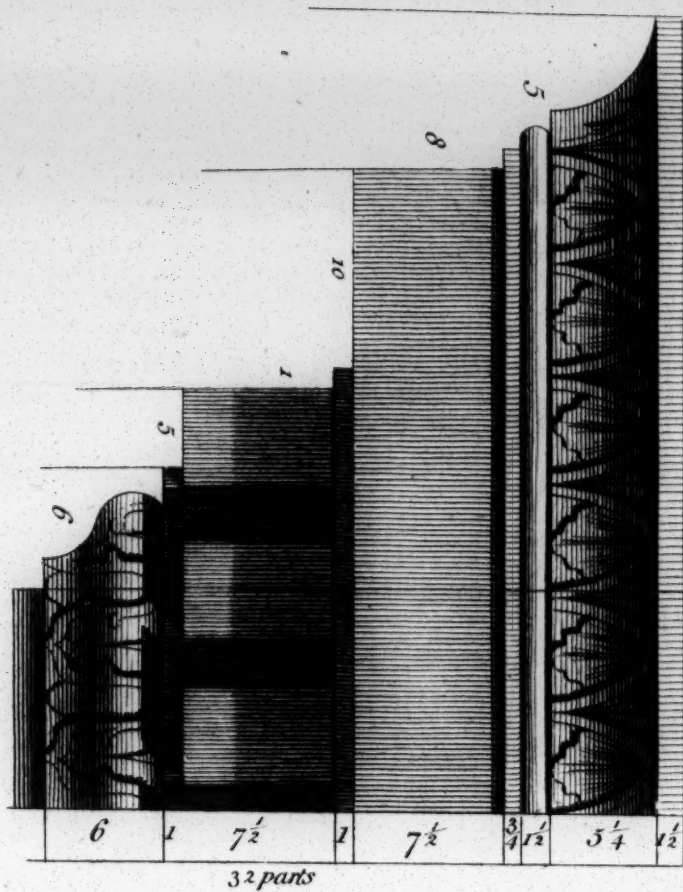
THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT
CHICAGO, ILL.
JANUARY 1950

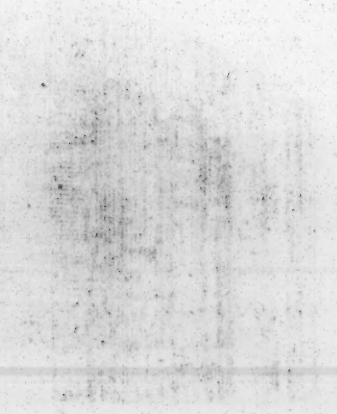
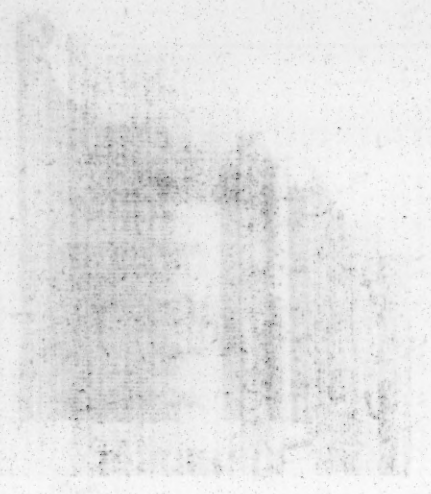
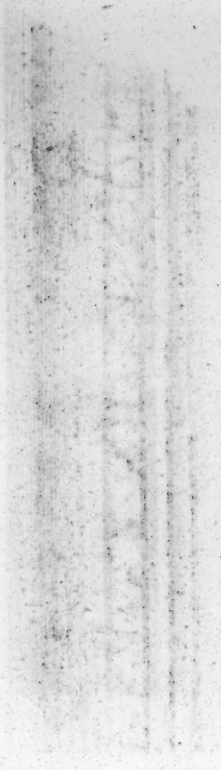
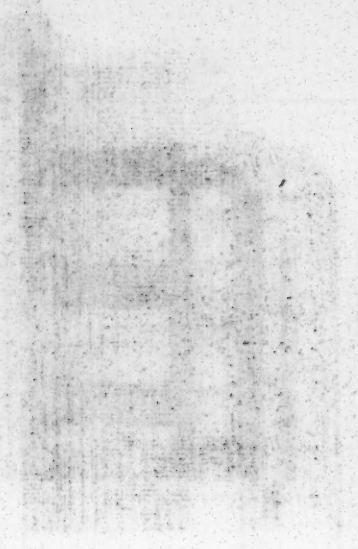


RECEIVED
JAN 19 1950
LIBRARY OF THE
PHYSICS DEPARTMENT
CHICAGO, ILL.

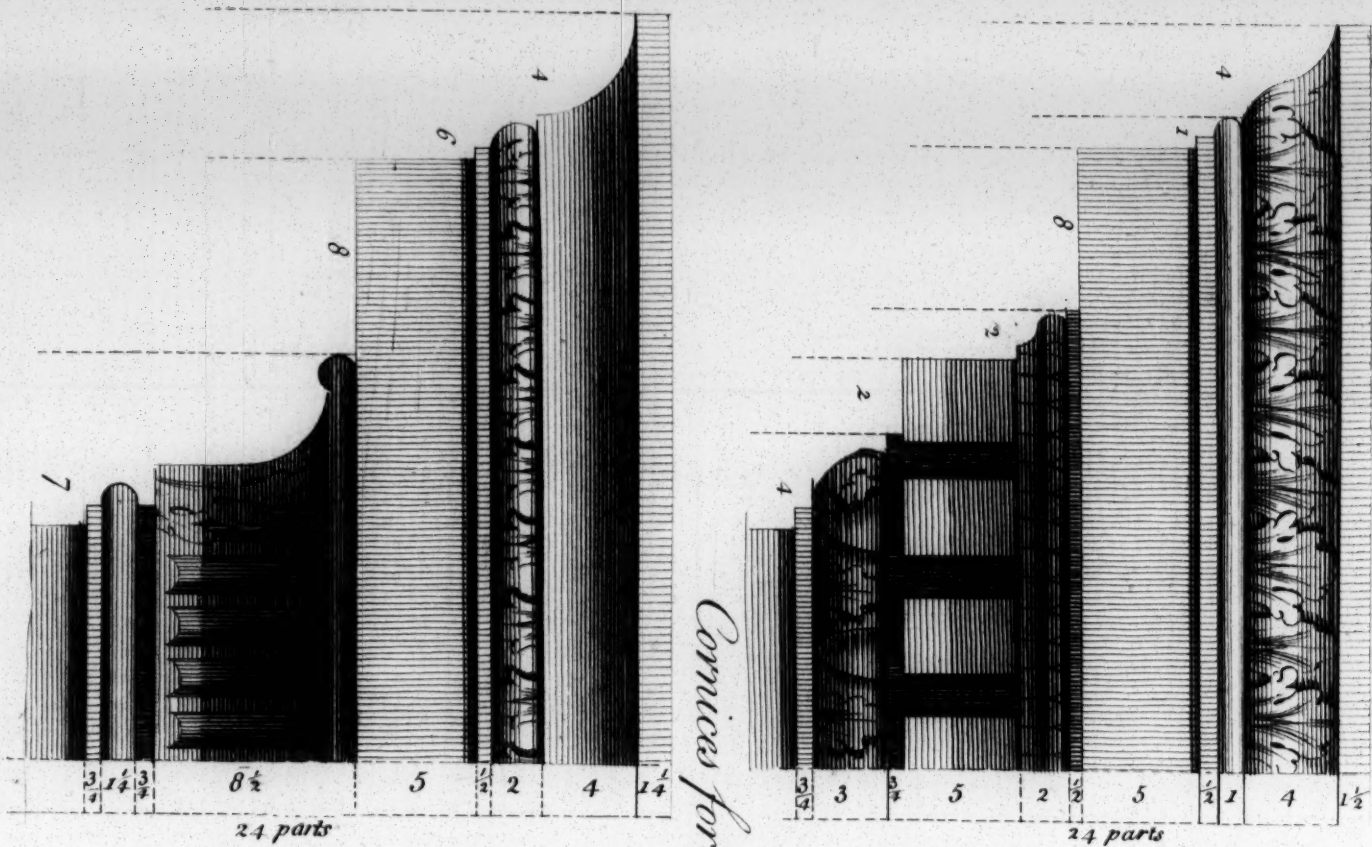
UNIVERSITY OF CHICAGO



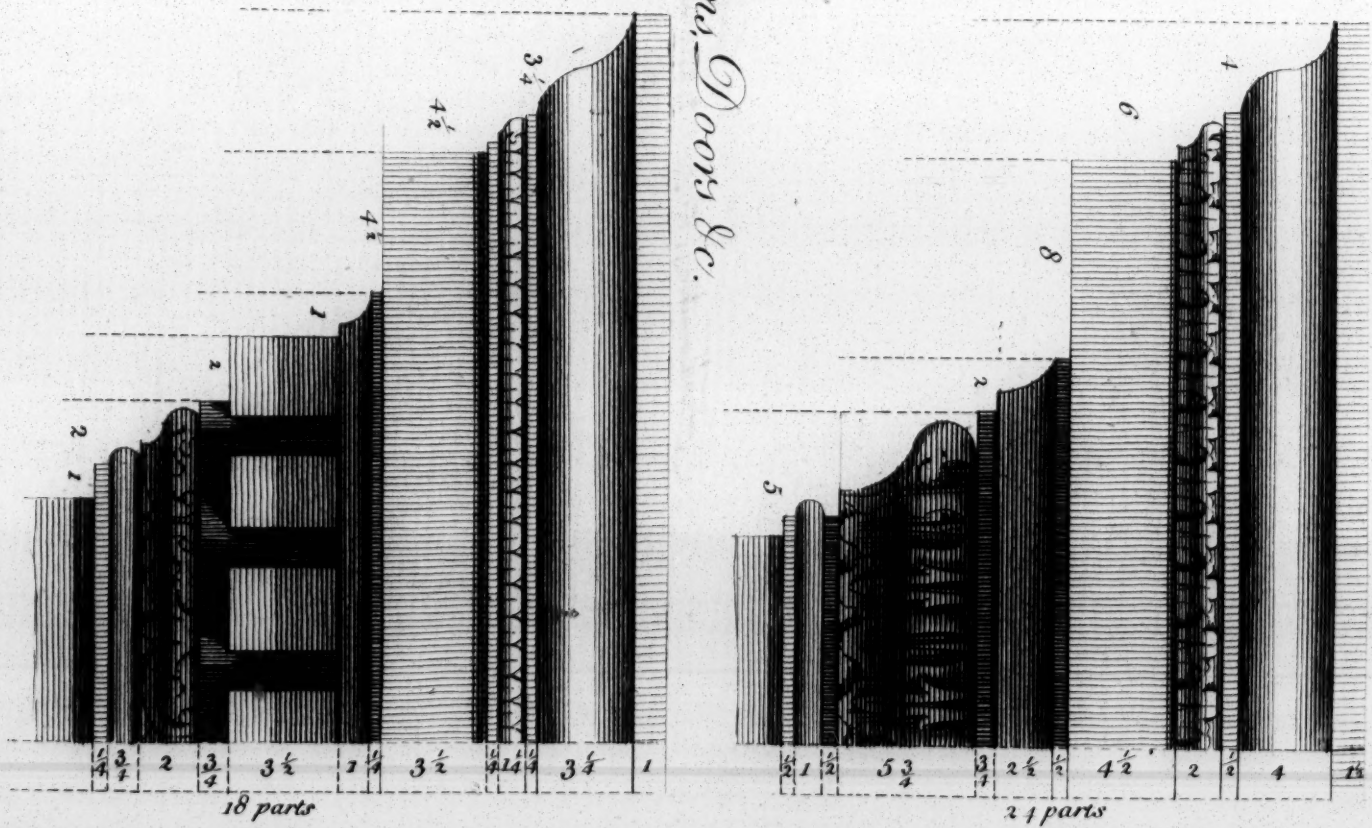
Capitals for Columns, Doors &c.



Cornices for Rooms, Doors &c.



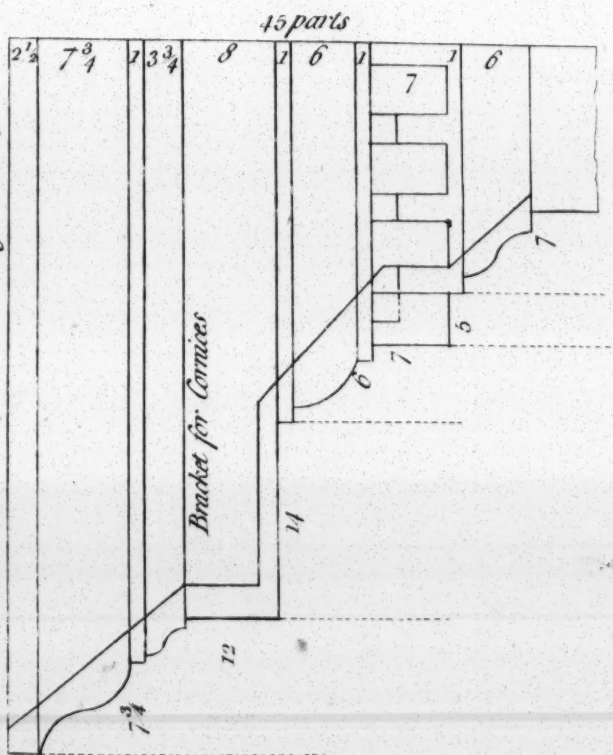
*For Rooms $1\frac{1}{8}$ part of the whole height. For Doors from 4 inches to 4 $\frac{1}{2}$.
For Chimneys from 4 inches to 4 $\frac{1}{2}$.*



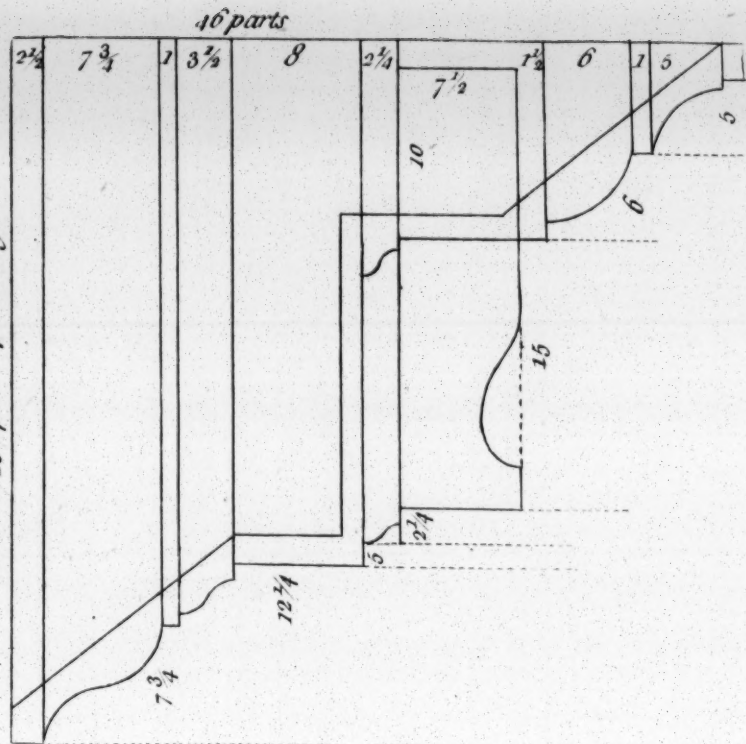


Cornices for Rooms &c.

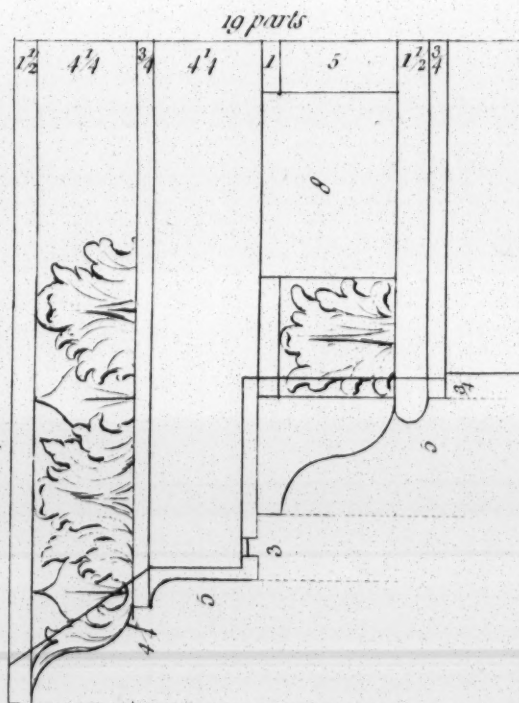
Cornices $\frac{1}{16}$ th part of the Height or $\frac{1}{48}$ part



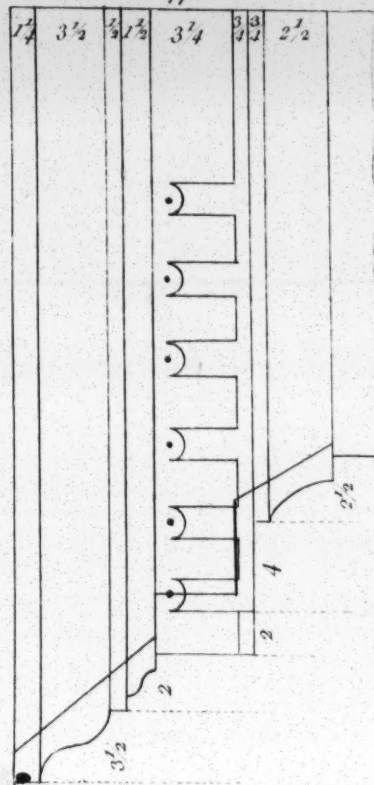
Cornices $\frac{1}{16}$ th part of the Height.



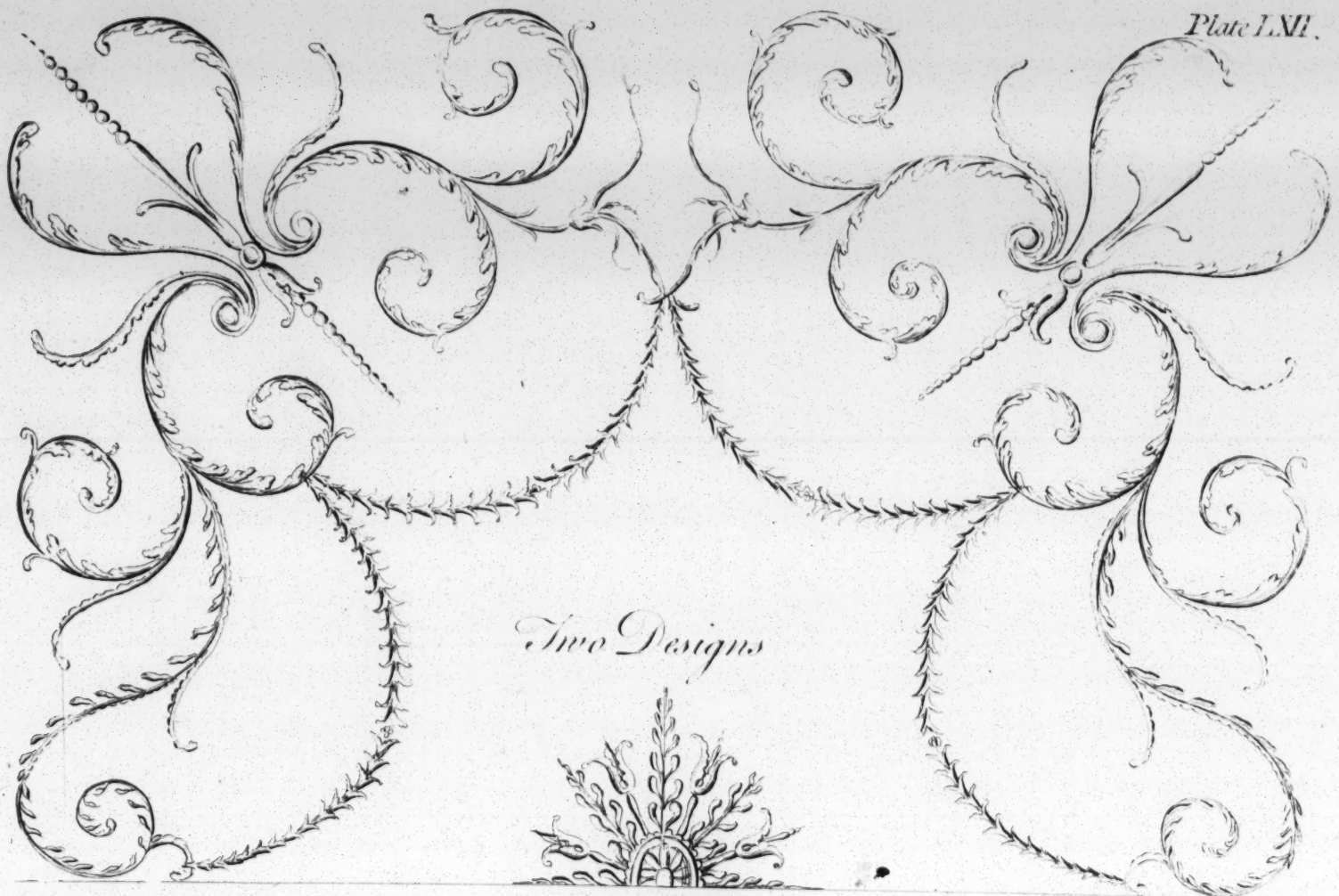
Cornices $\frac{1}{16}$ th, or $\frac{1}{18}$ th part of the Height for Rooms &c.



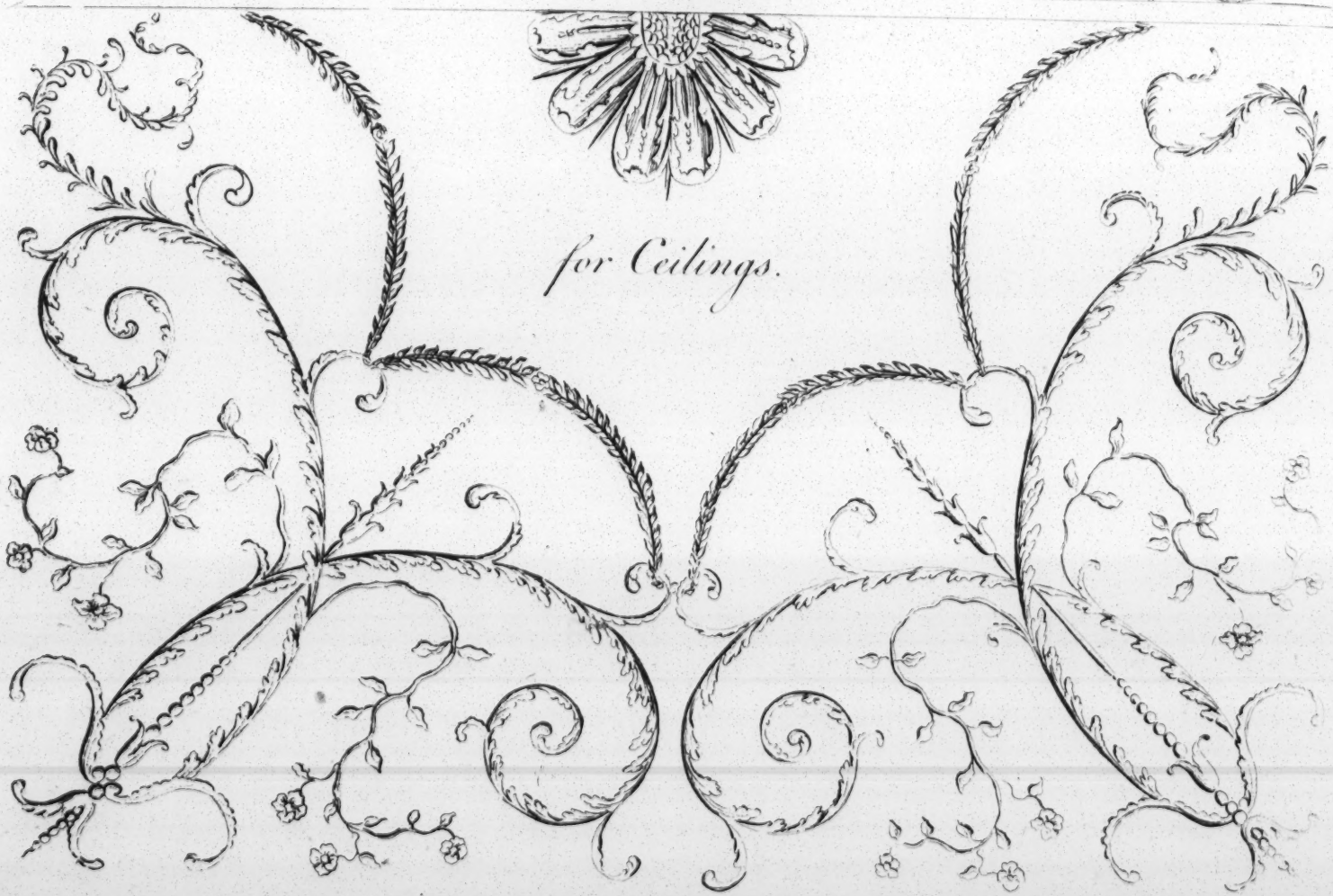
14 parts





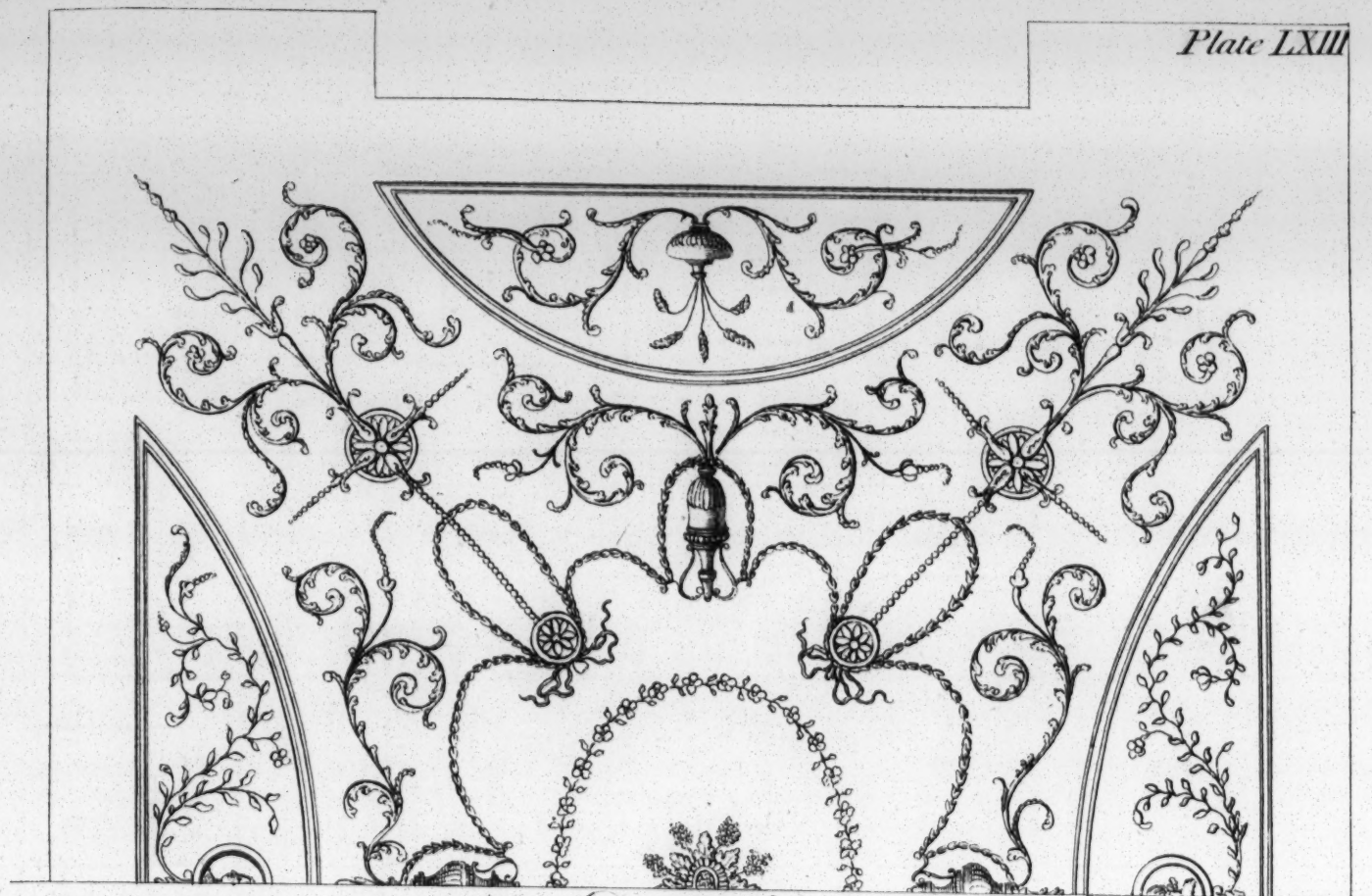


Two Designs

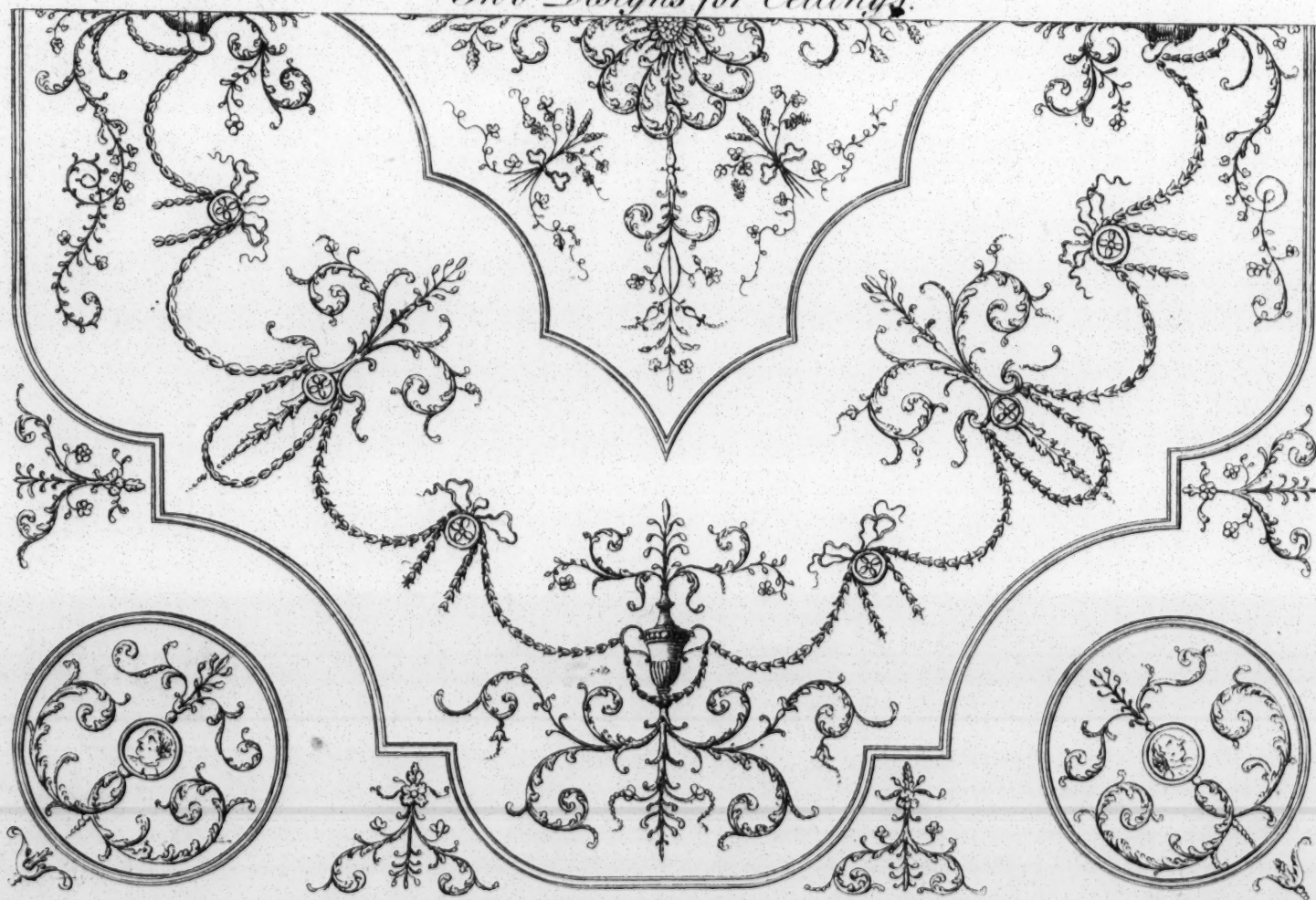


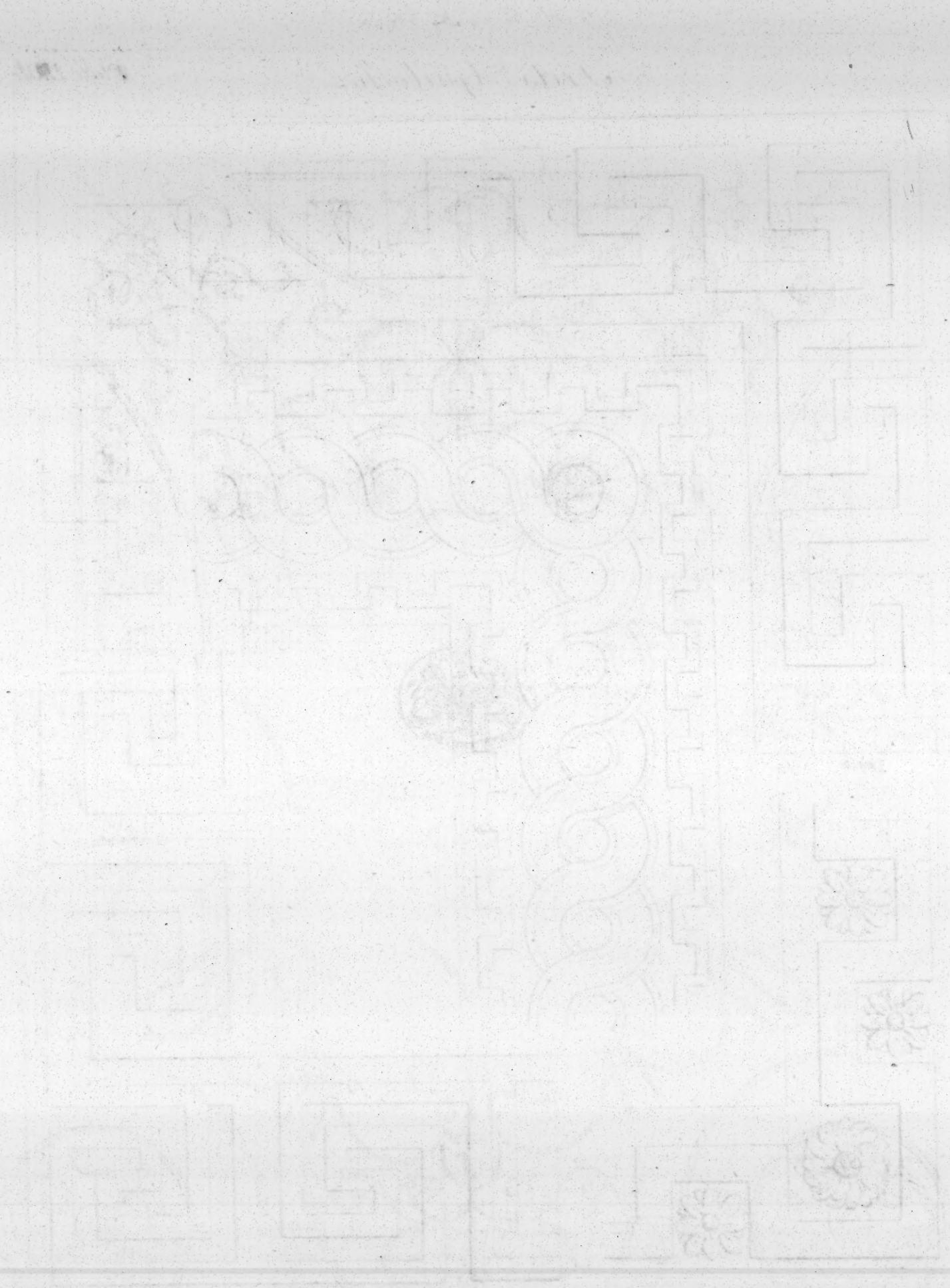
for Ceilings.

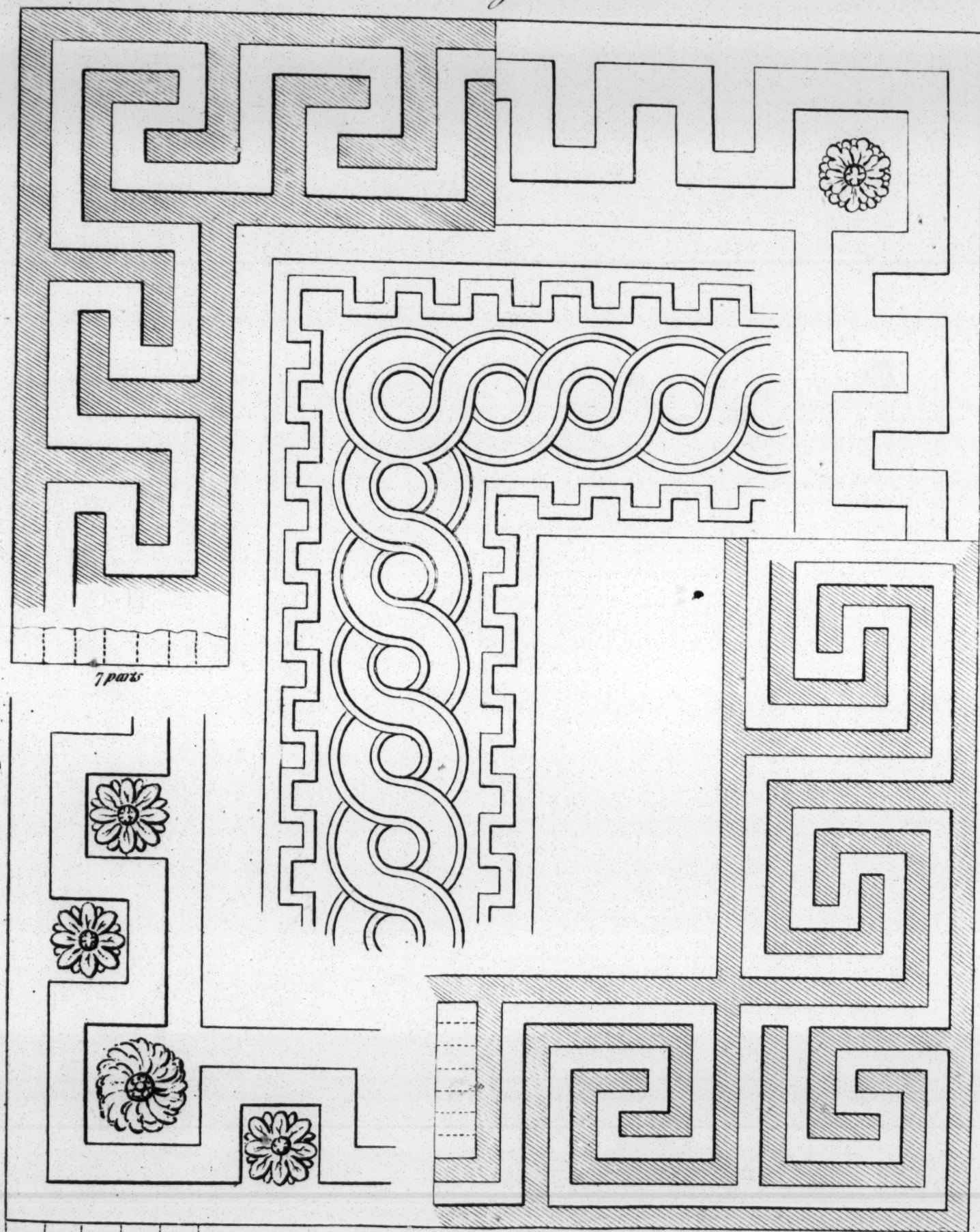


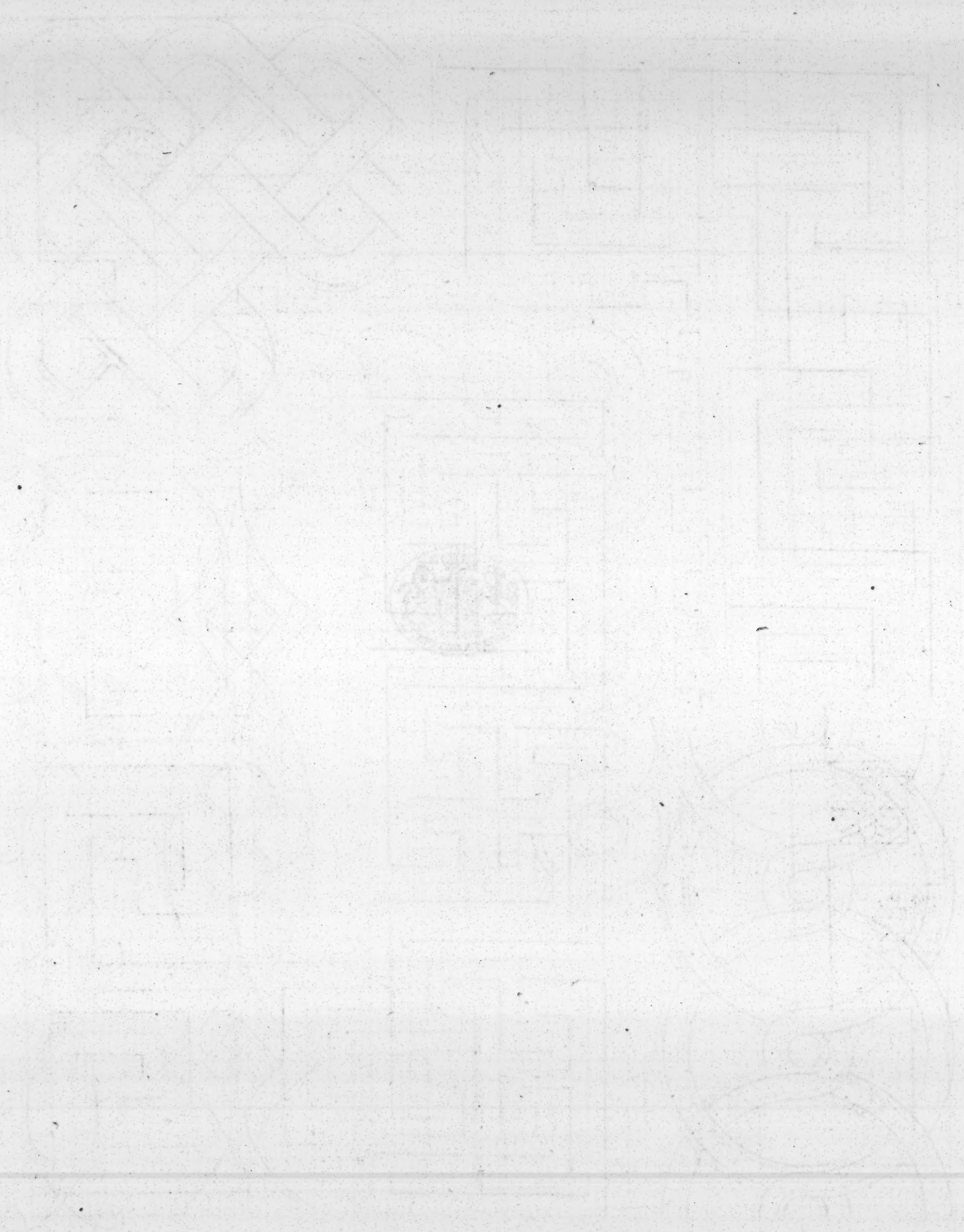


Two Designs for Ceilings.



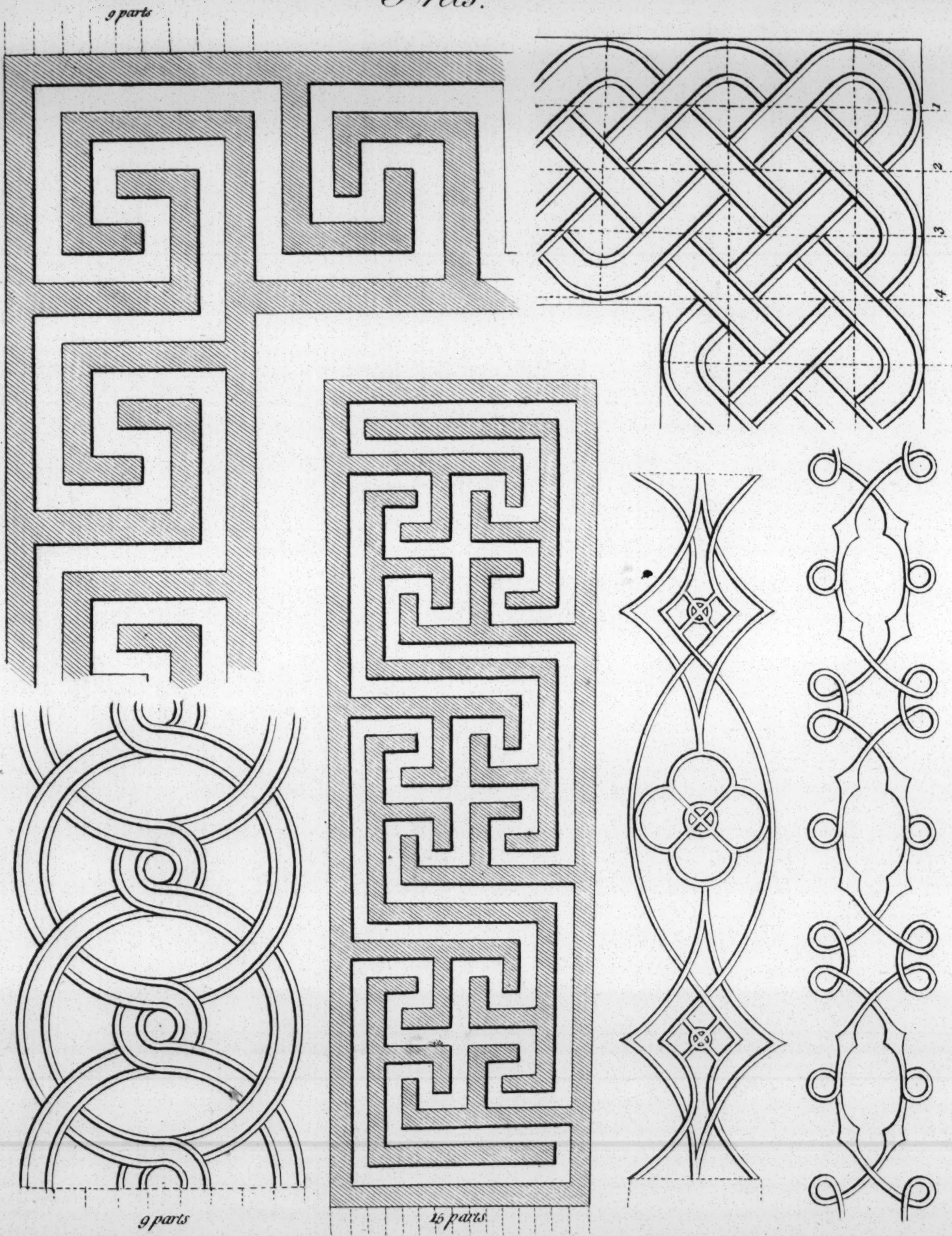


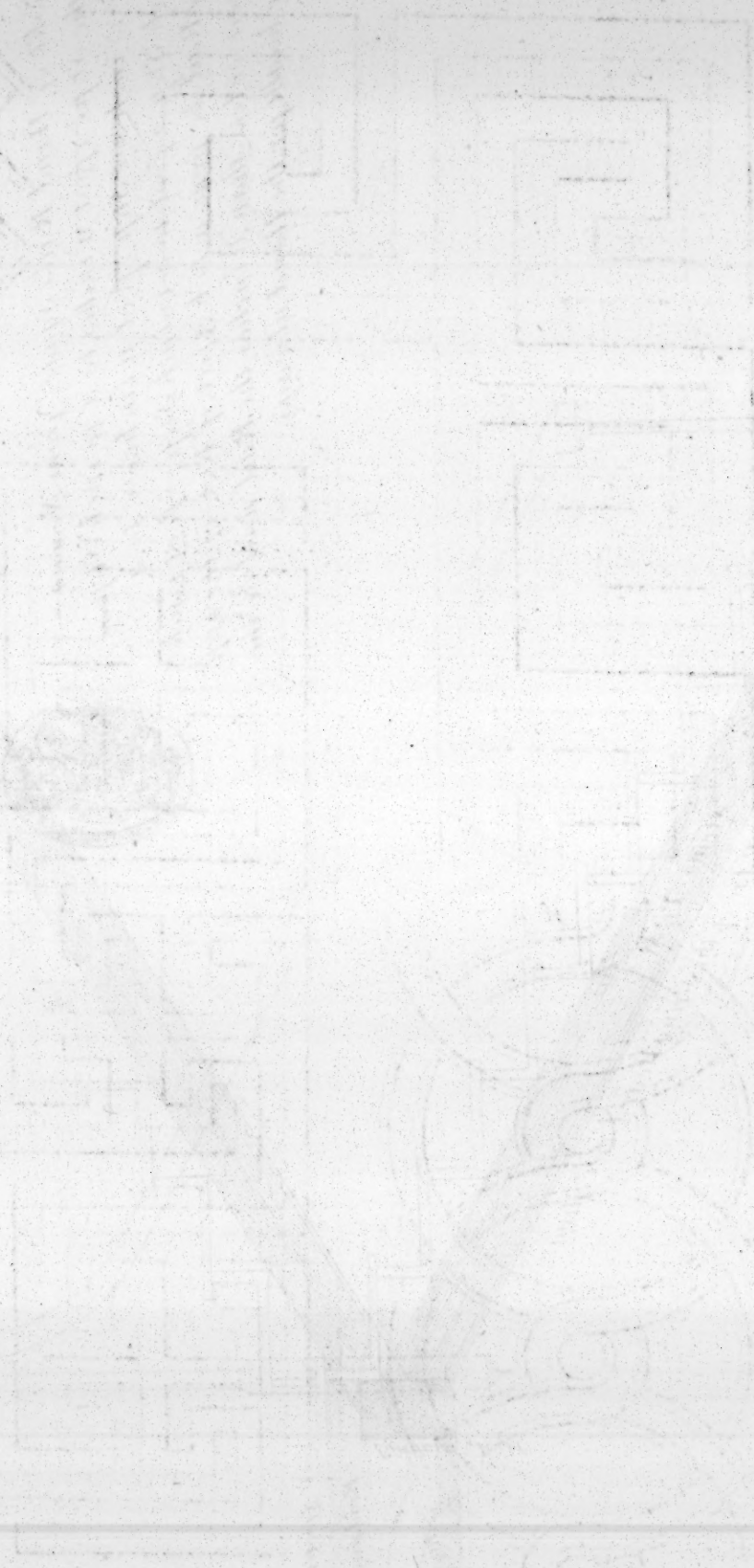
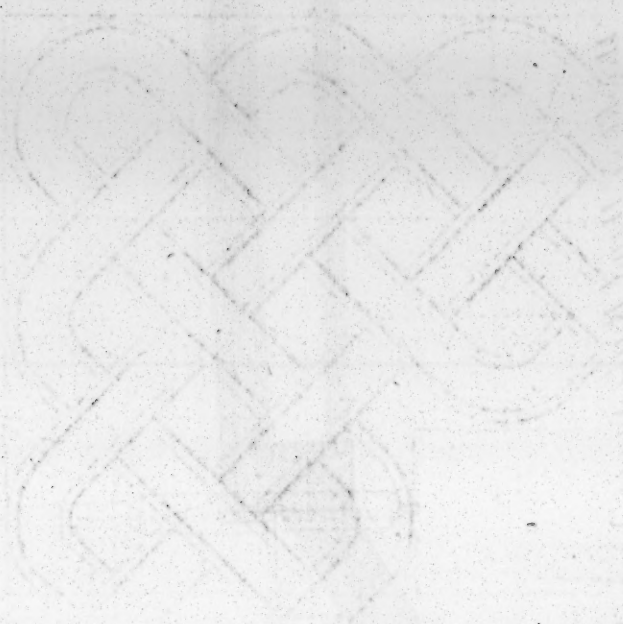




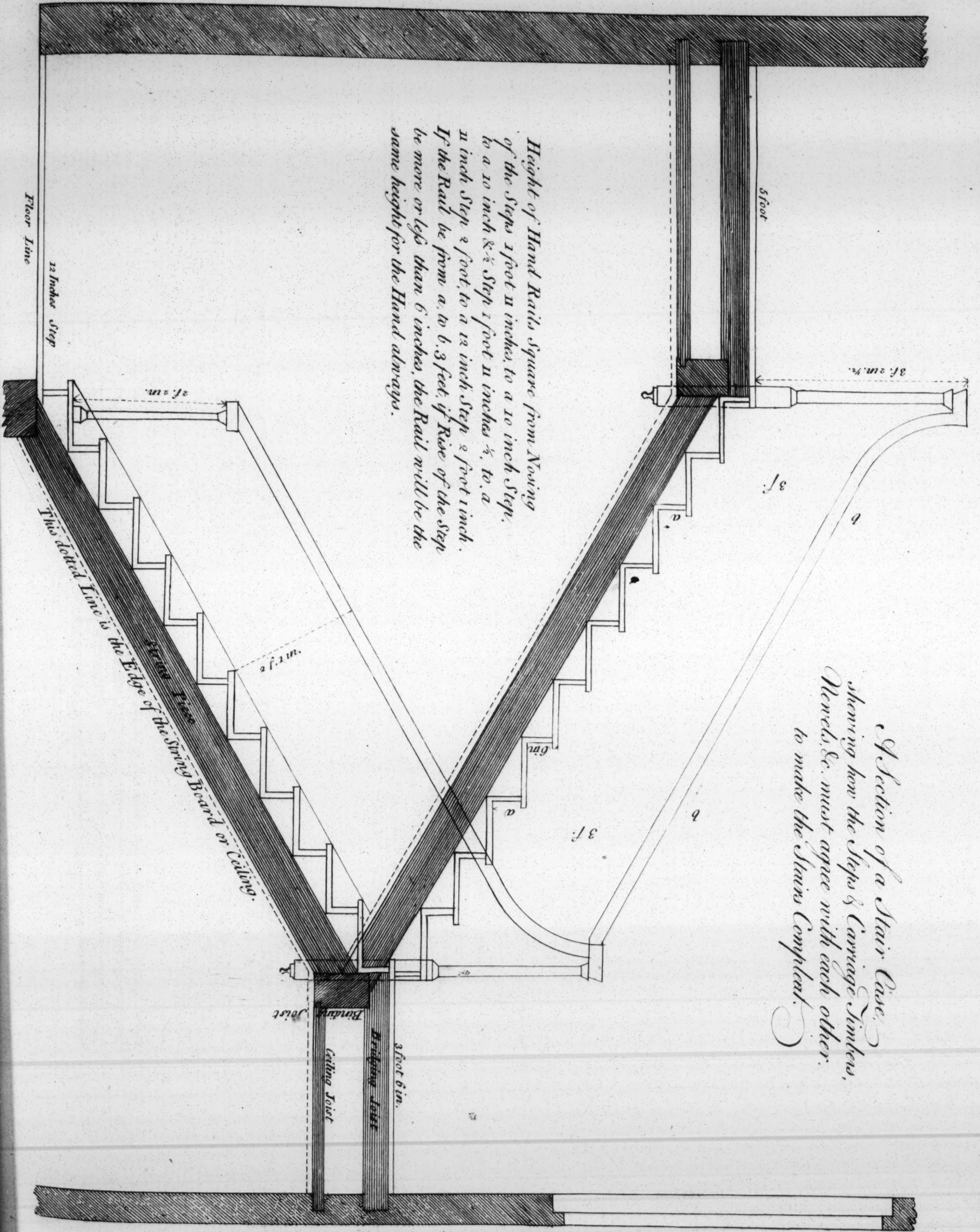
Frets.

Plate LXV.





2



Height of Hand Rails Square from Nosing
of the Steps 2 foot 11 inches, to a 10 inch Step,
to a 10 inch & 1/2 Step 1 foot 11 inches 1/2, to a
11 inch Step 2 foot, to a 12 inch Step 2 foot 1 inch.
If the Rail be from a, to b, 3 feet, if Rise of the Step
be more or less than 6 inches, the Rail will be the
same height for the Hand always.

A Section of a Stair Case,
showing how the Steps & Carriage Timbers,
Mereis, &c. must agree with each other,
to make the Stairs Compliant.

1871

1871

1871

1871

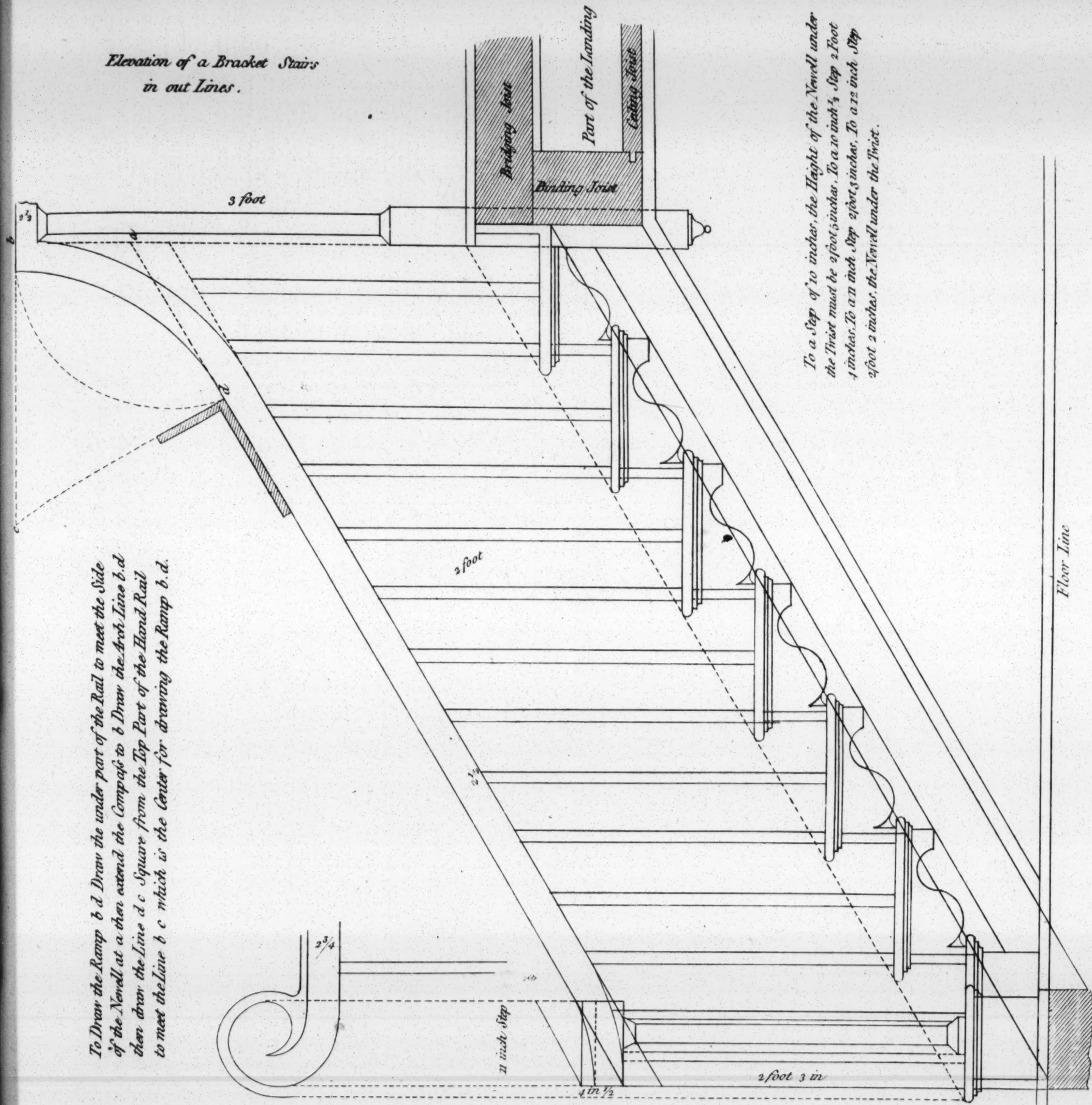


1871

1871

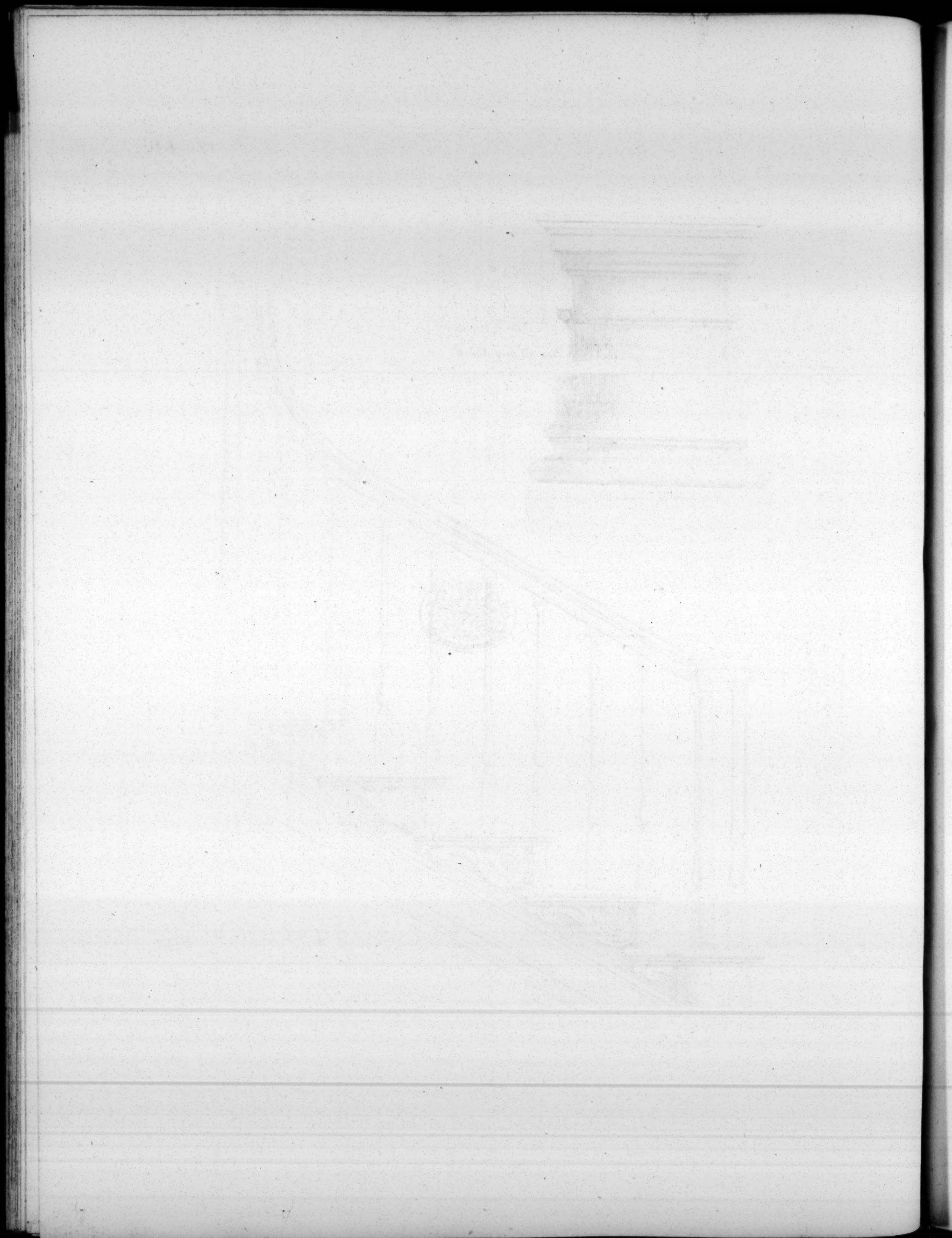
1871

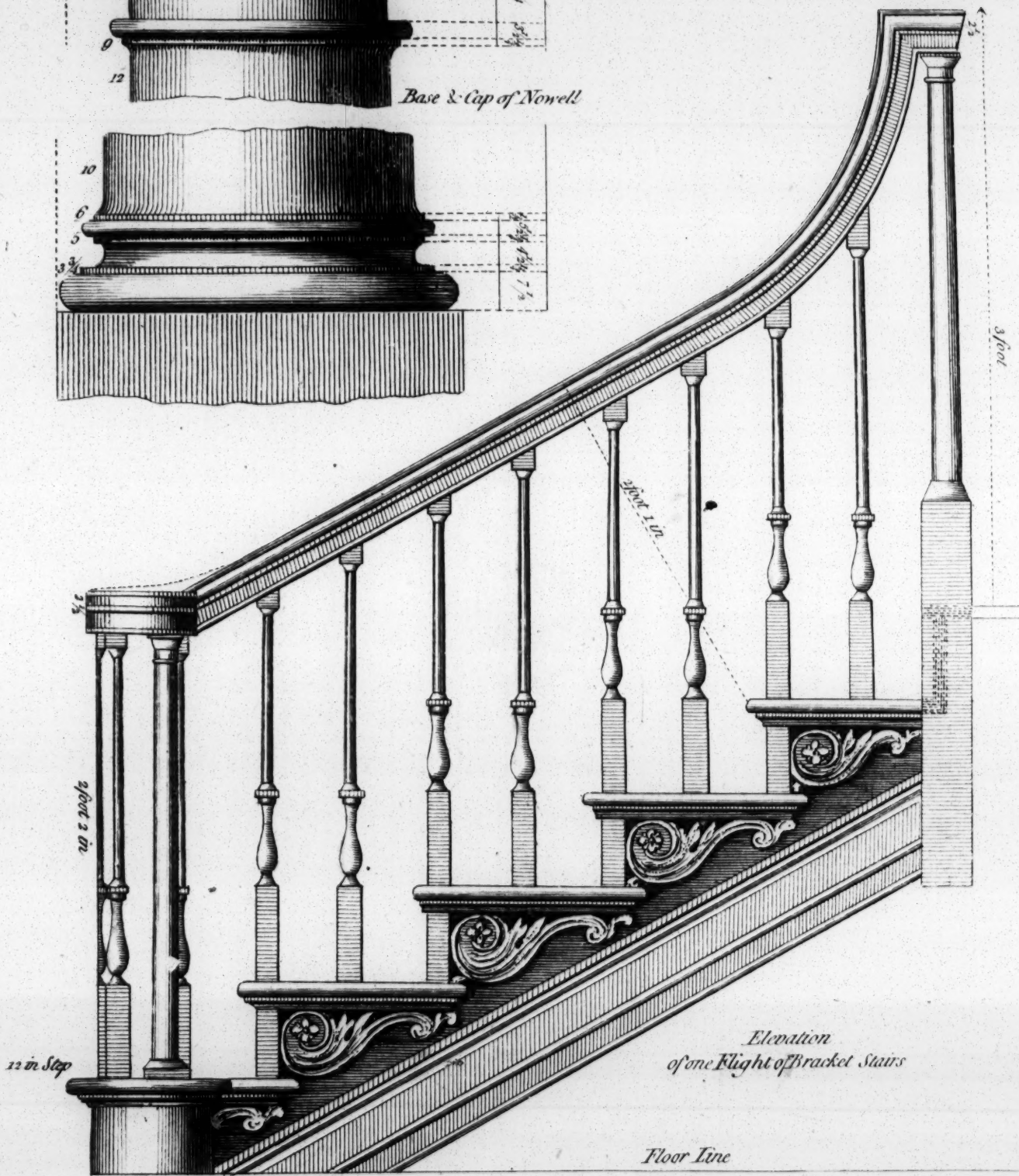
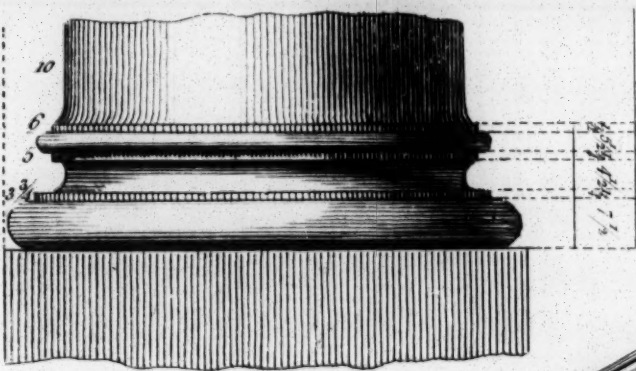
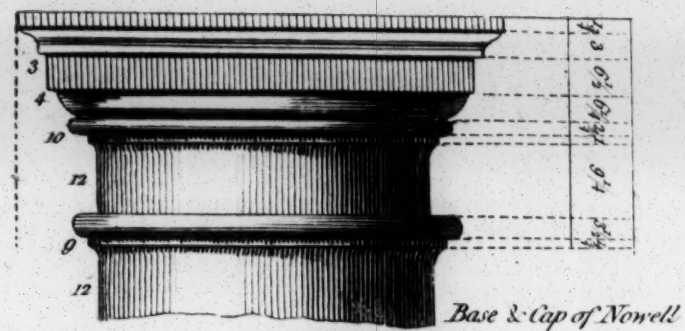
Elevation of a Bracket Stairs
in out Lines.



To Draw the Ramp b d Draw the under part of the Rail to meet the Side
of the Newell at a then extend the Compass to b Draw the Arch Line b d
then draw the Line d c Square from the Top Part of the Hand Rail
to meet the Line b c which is the Center for drawing the Ramp b d.

To a Step of 10 inches, the Height of the Newell under
the Twist must be 2 foot 5 inches. To a 10 inch 1/2 Step 2 Foot
4 inches. To a 11 inch Step 2 foot 3 inches. To a 12 inch Step
2 foot 2 inches, the Newell under the Twist.



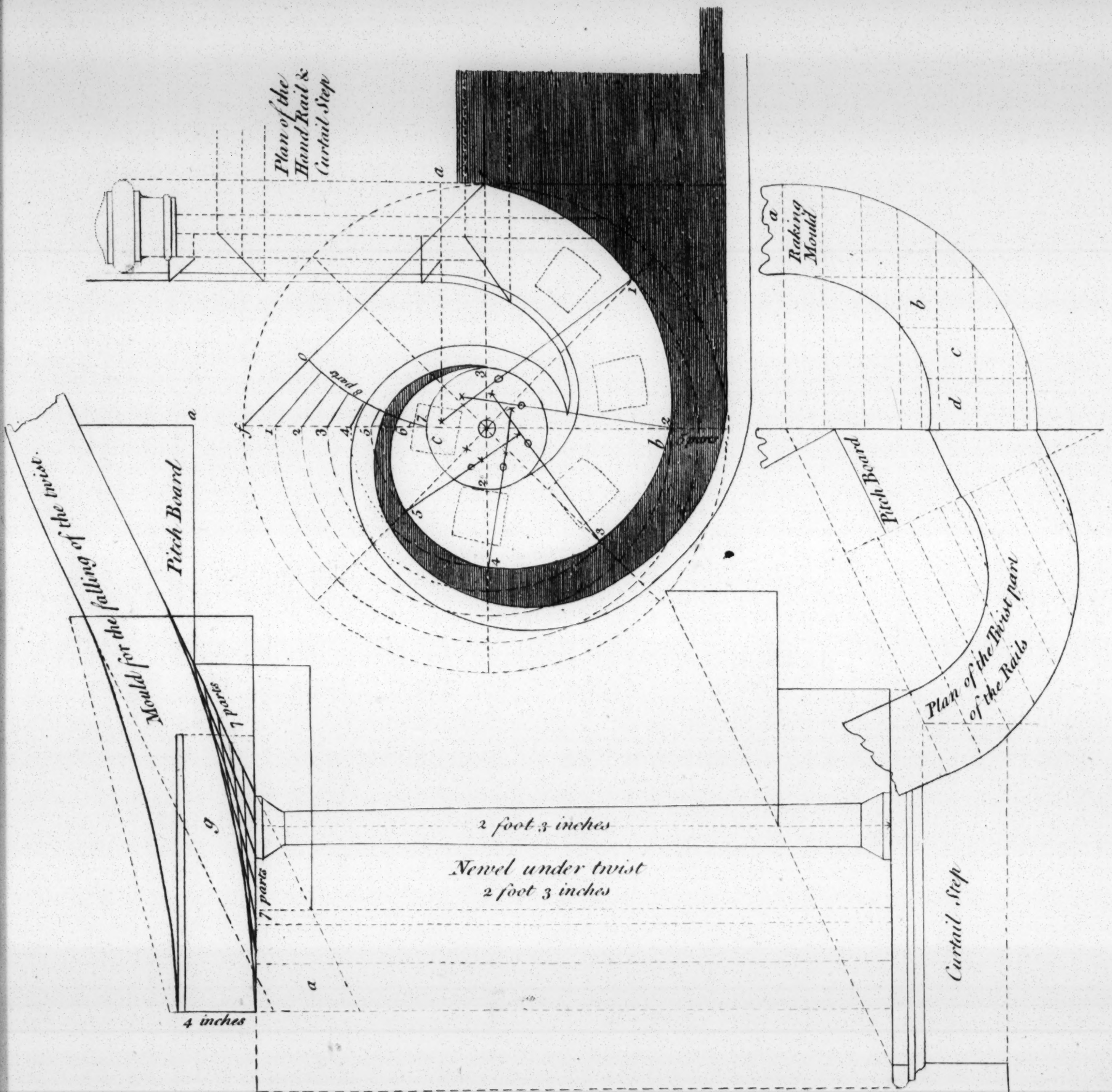


To face P L A T E LXIX.

To draw the Plan and Scroll of a twist Rail for a Stair-Cafe.

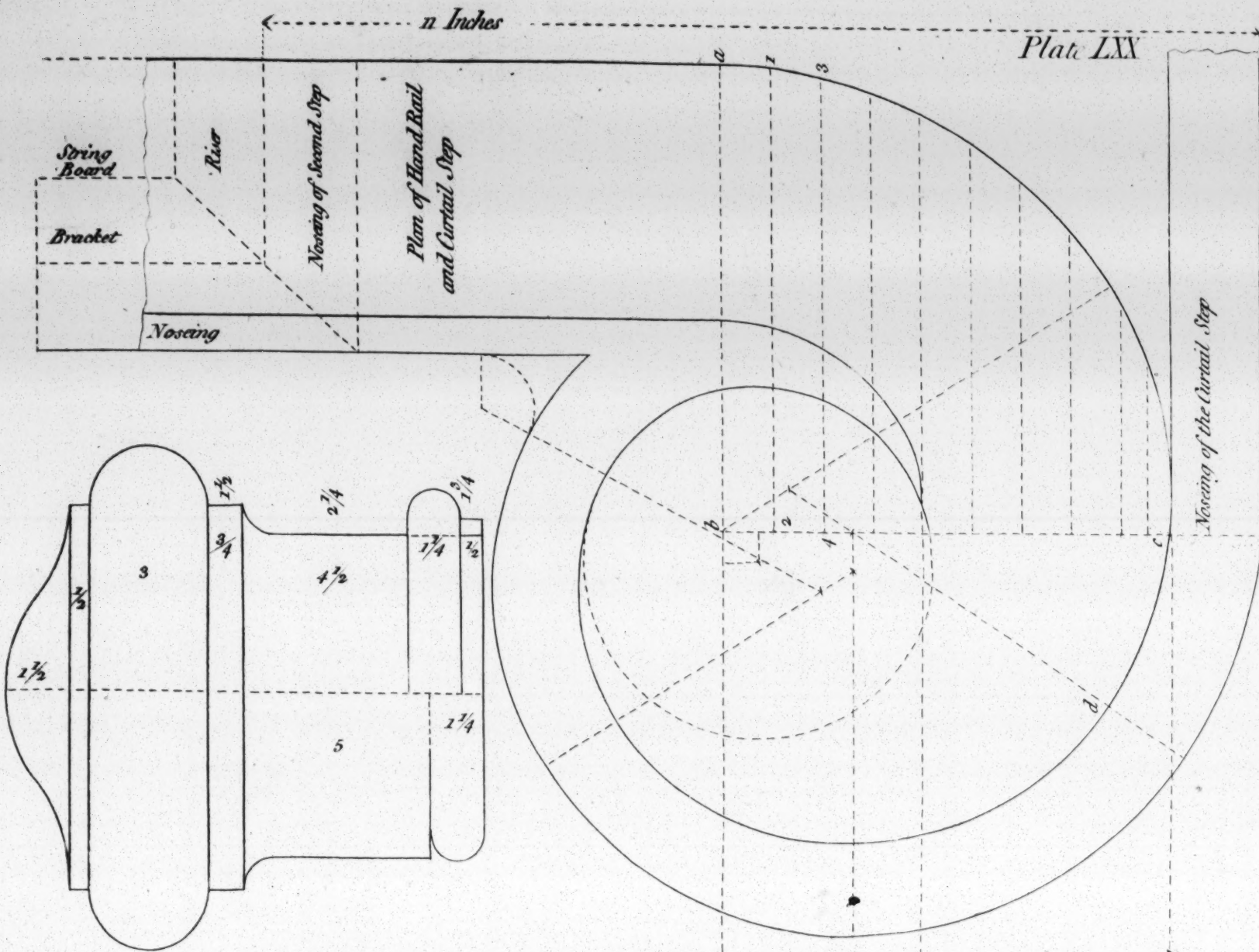
DRAW a Circle equal to the Breadth of two Steps, and divide it into eight Parts, then draw a Circle round the Centre five Inches Diameter, as 2, 3, then draw the Line *e, f*, and set one Foot of the Compass at *e*, and draw the Arch Line 7, 0, which must be divided into eight Parts, and draw Lines from *e*, thro' each eighth Part to the Line 1, 2, 3, 4, 5, &c. then set the Compass in the Centre of the Scroll, and draw the dotted Lines from 1 on the Scale to 1 on the Edge of the Rail, and from 2 to 2 on the Edge of the Rail, and so for all the Rest to each eighth Part of the Circle, which gives the outer Edge of the Rail.

To find the Centre for drawing each eighth Part, set one Foot of the Compass in the Centre of the Scroll, and take the Distance to *f*, with the same Radius; set the Foot at *e*, and make a Mark at *c*, and with the same Radius set one Foot at 1 on the Edge of the Rail, and bisect the former Stroke at *c*, which is the Centre for the first eighth Part, then take from the Centre of the Scroll to 1 on the Scale, and set one Foot at 1 on the Edge of the Rail, make a Mark in the Eye and move the Compass to 2 on the Edge of the Rail, and bisect the former Stroke, that is the Centre for the second eighth Part, and so on for all the Rest. The Centre for the Front of Riser and Nosing of Step are the black Dots, one fifth Part from the Rail to the Nosing of the Step without the other Centre; the Pieces which make the twist Part of the Rail are *d, e, b*, on the raking Mould the Twist begins at *a* on the Edge of the Rail, and Ends at three on ditto, the remaining Part is level; the lower Part of the Scroll from 2 is cut out of a Parallel Piece, as represented by *g* on the Newel, &c.

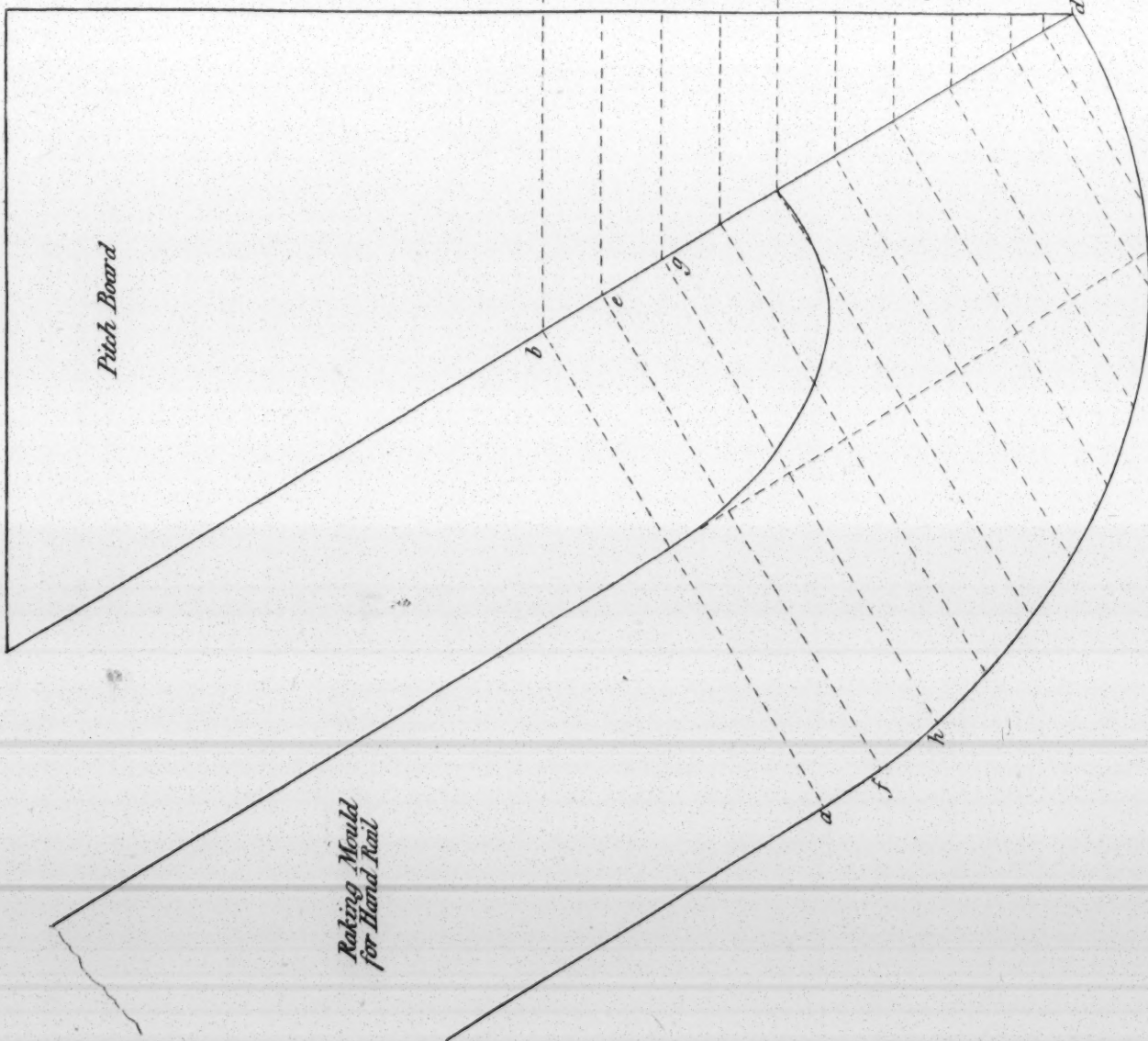




n Inches



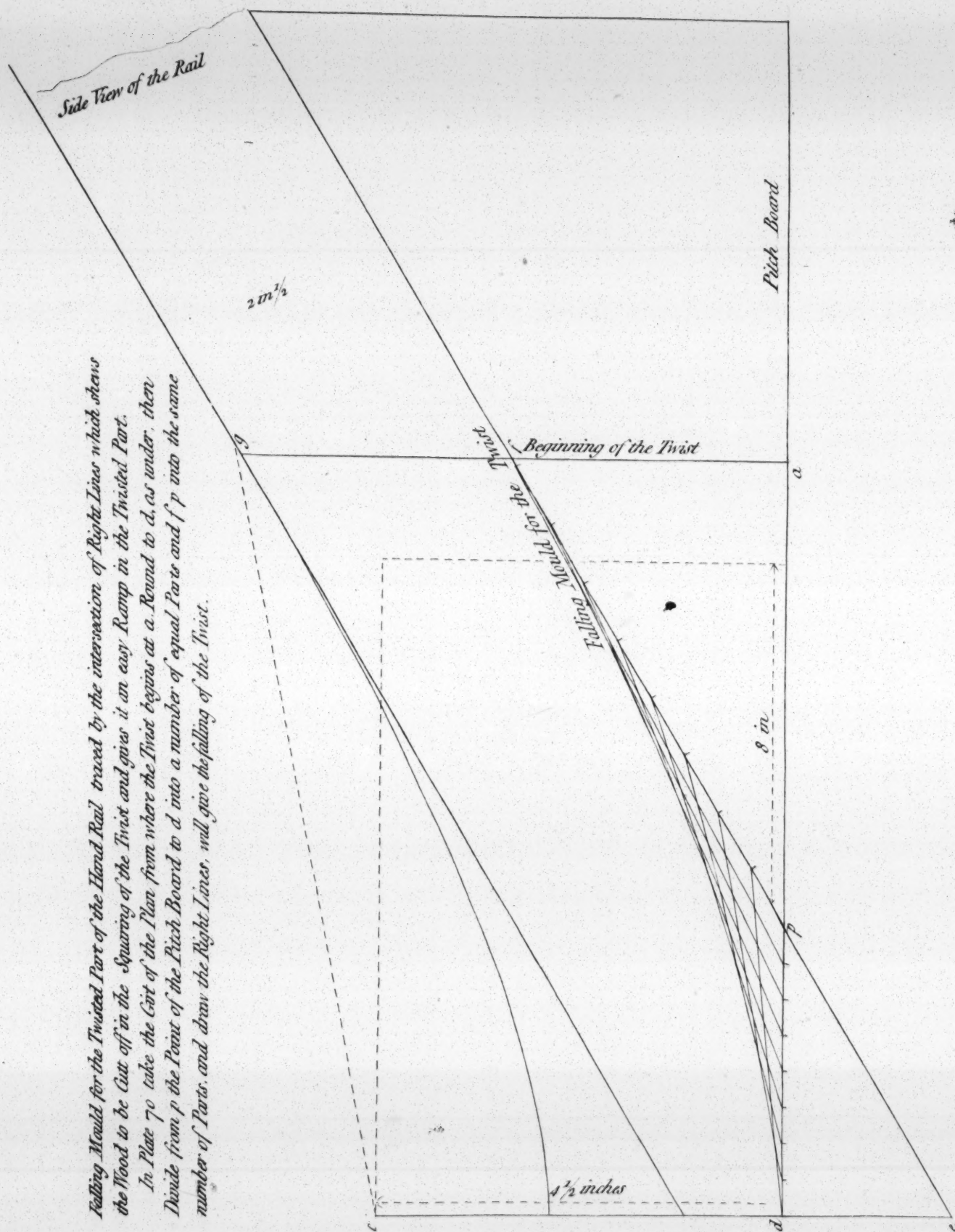
Hand Rail at Large for Practice



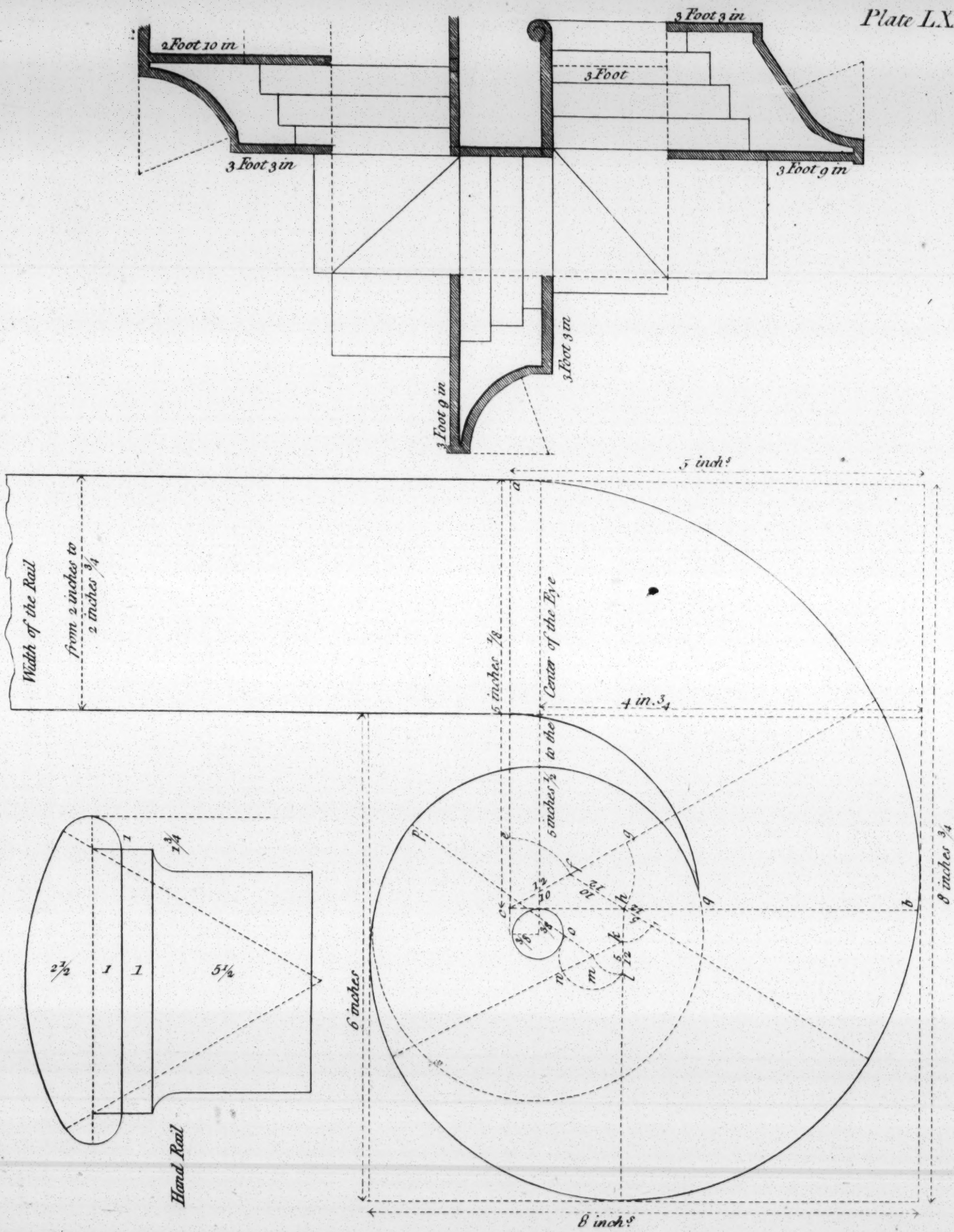


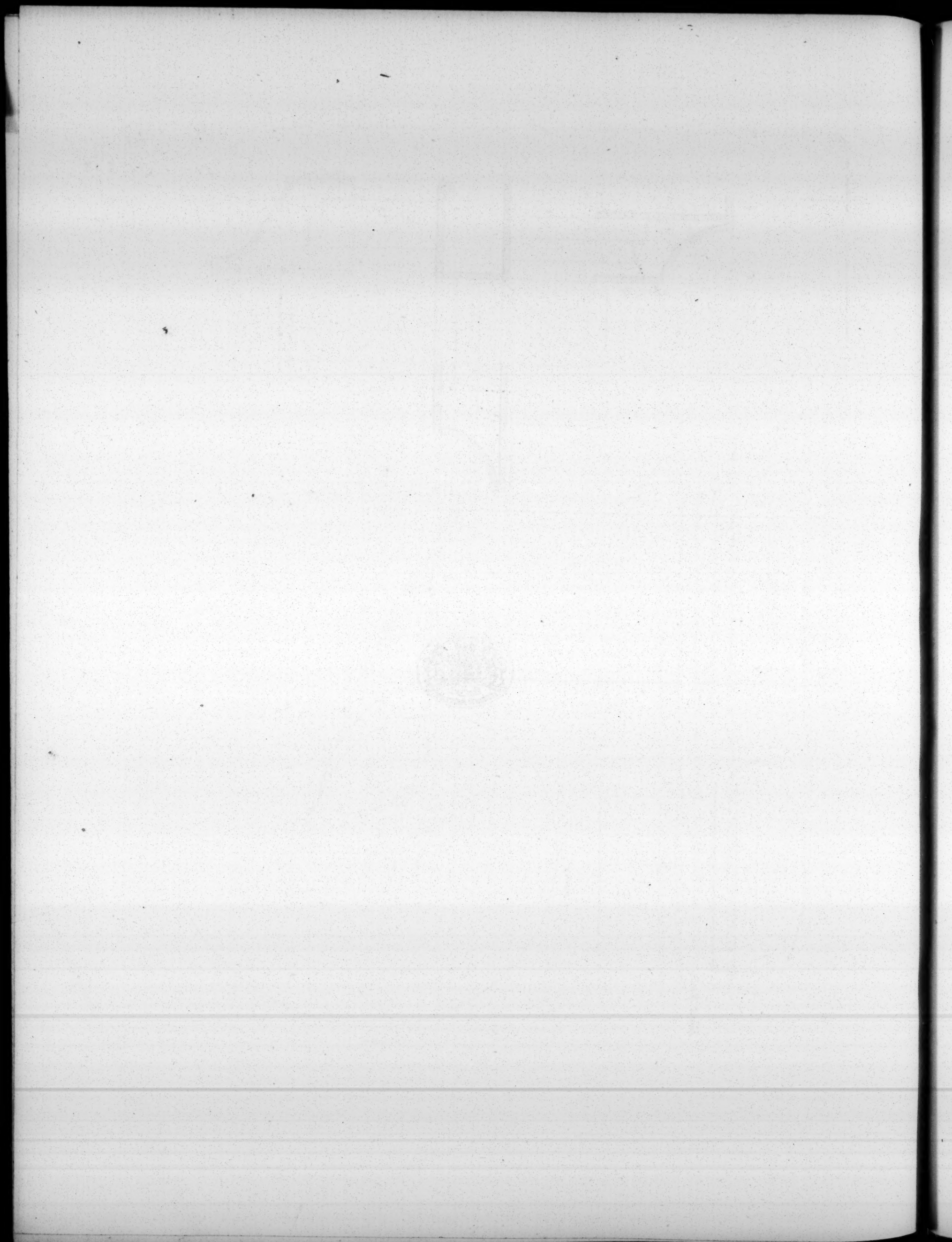
Rolling Mould for the Twisted Part of the Hand Rail traced by the intersection of Right Lines which shews the Mould to be Cut off in the Squaring of the Twist and gives it an easy Ramp in the Twisted Part.

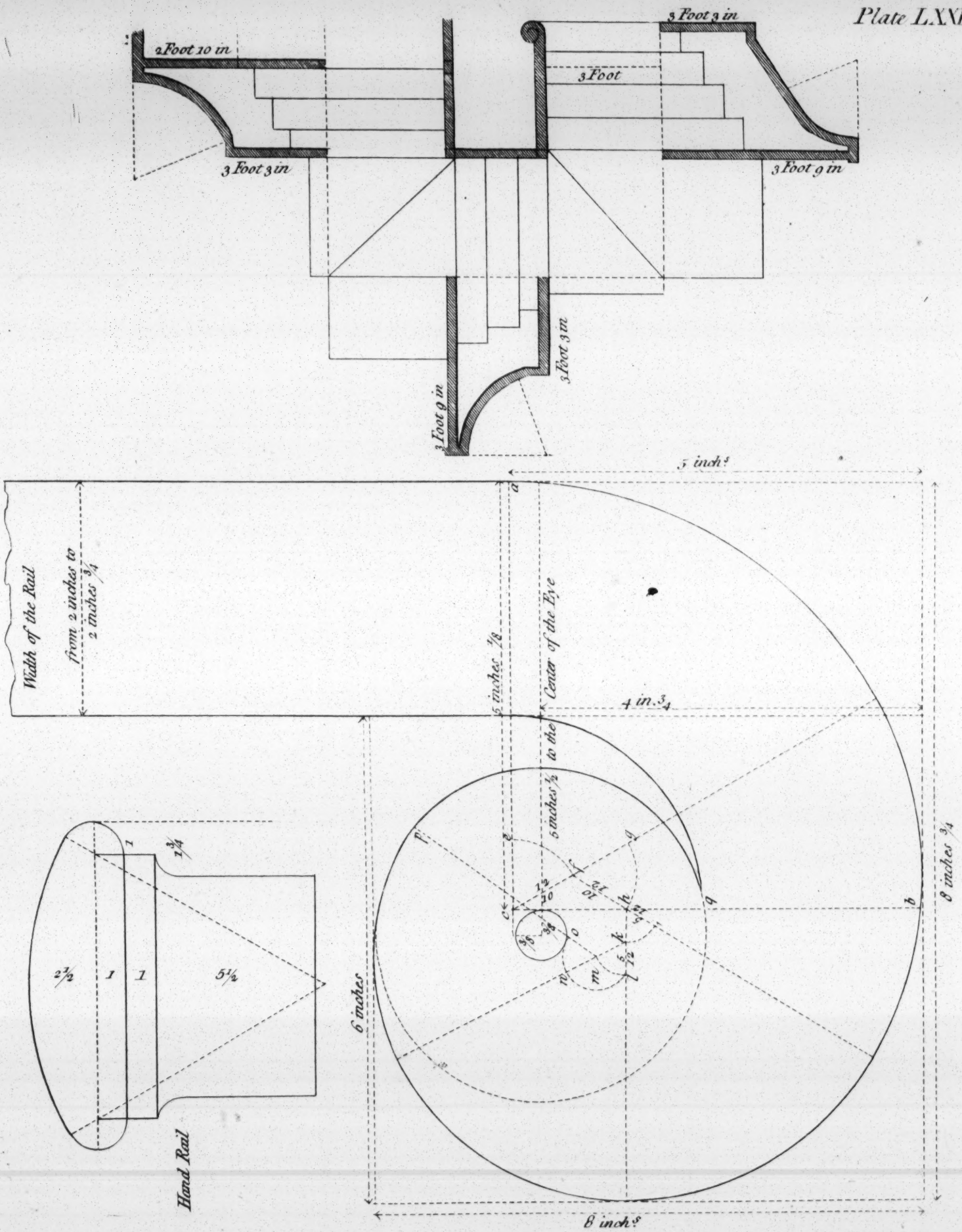
In Plate 70 take the Girt of the Plan from where the Twist begins at a Round to d, as under, then Divide from p the Point of the Pitch Board to d into a number of equal Parts and p into the same number of Parts, and draw the Right Lines, will give the falling of the Twist.





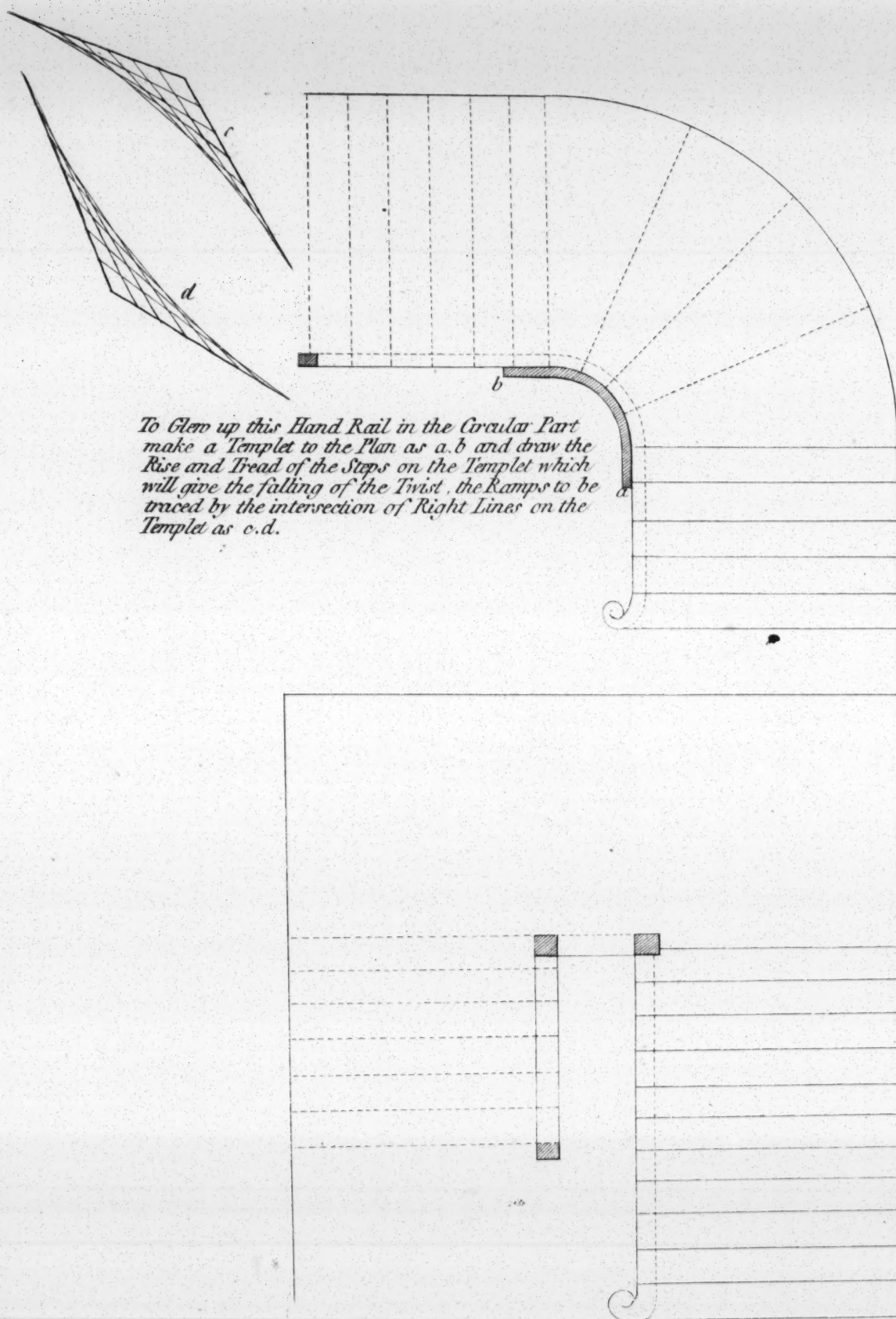




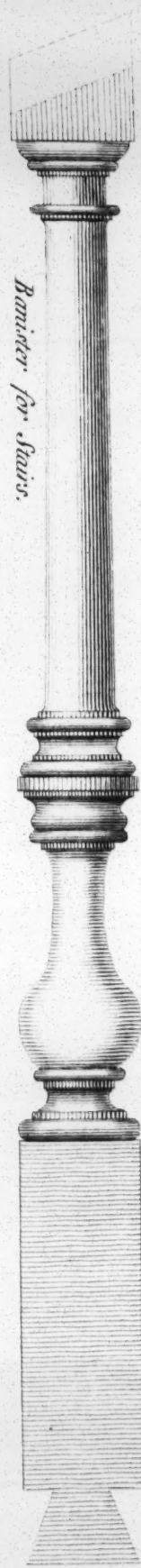




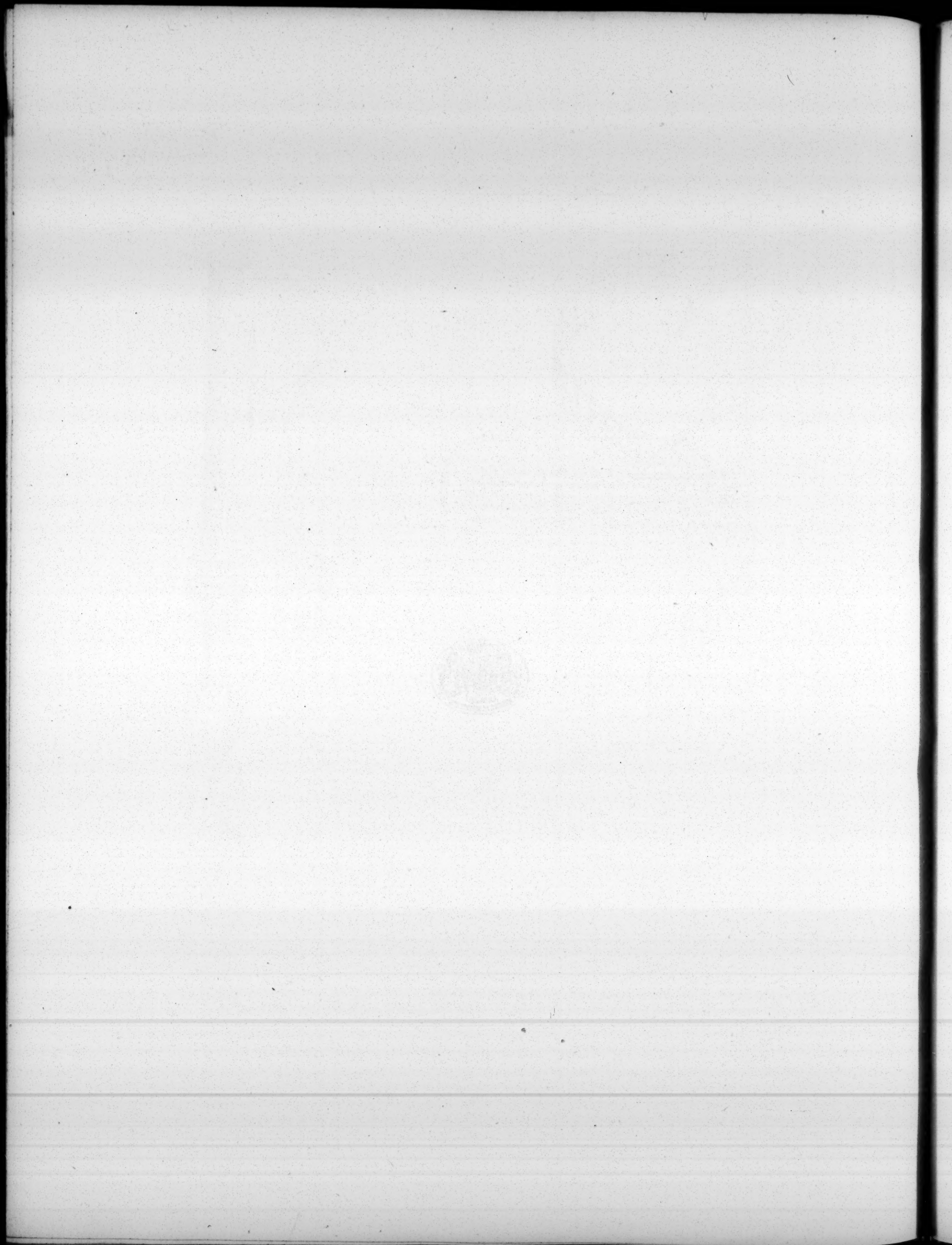
Two Plans for Stair Cases.



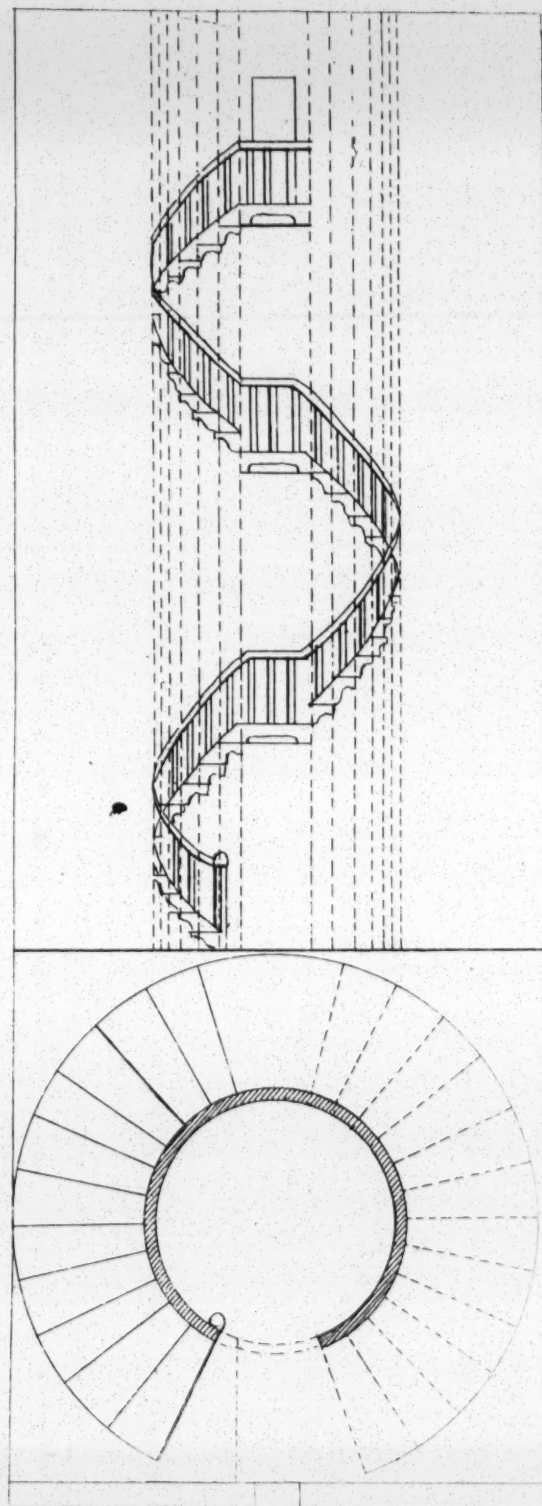
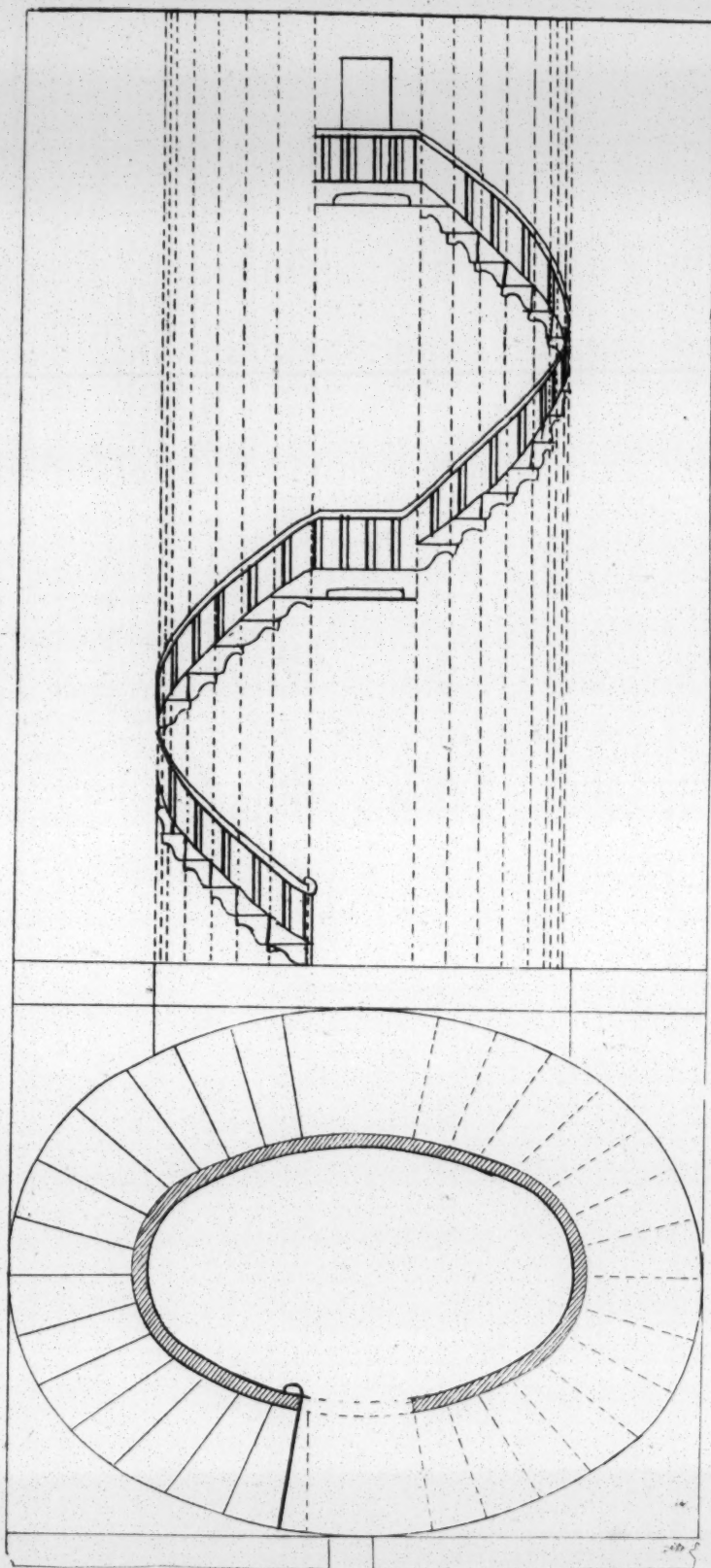
To Glue up this Hand Rail in the Circular Part make a Templet to the Plan as a.b and draw the Rise and Tread of the Steps on the Templet which will give the falling of the Twist, the Ramps to be traced by the intersection of Right Lines on the Templet as c.d.



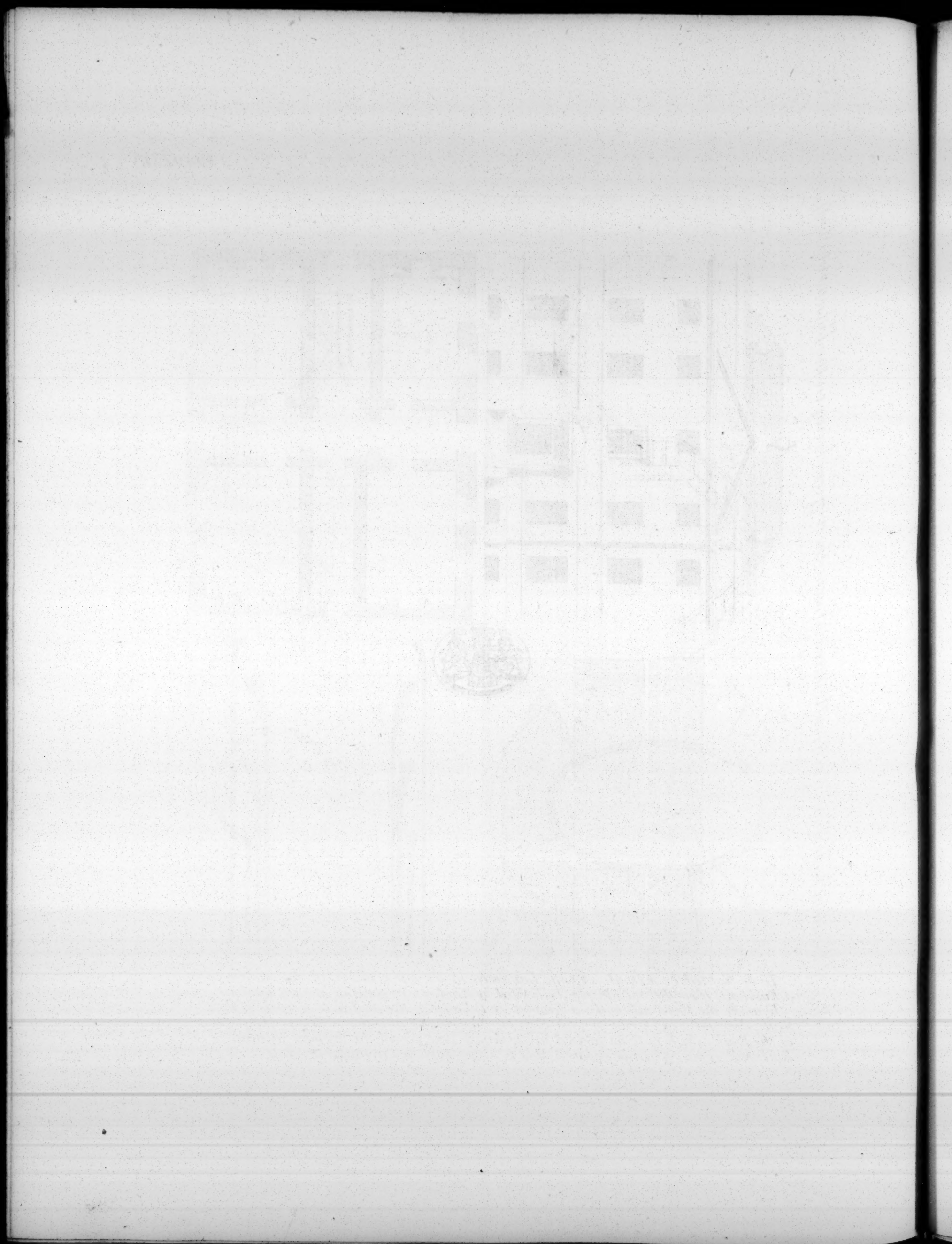
Handrail for Stairs.



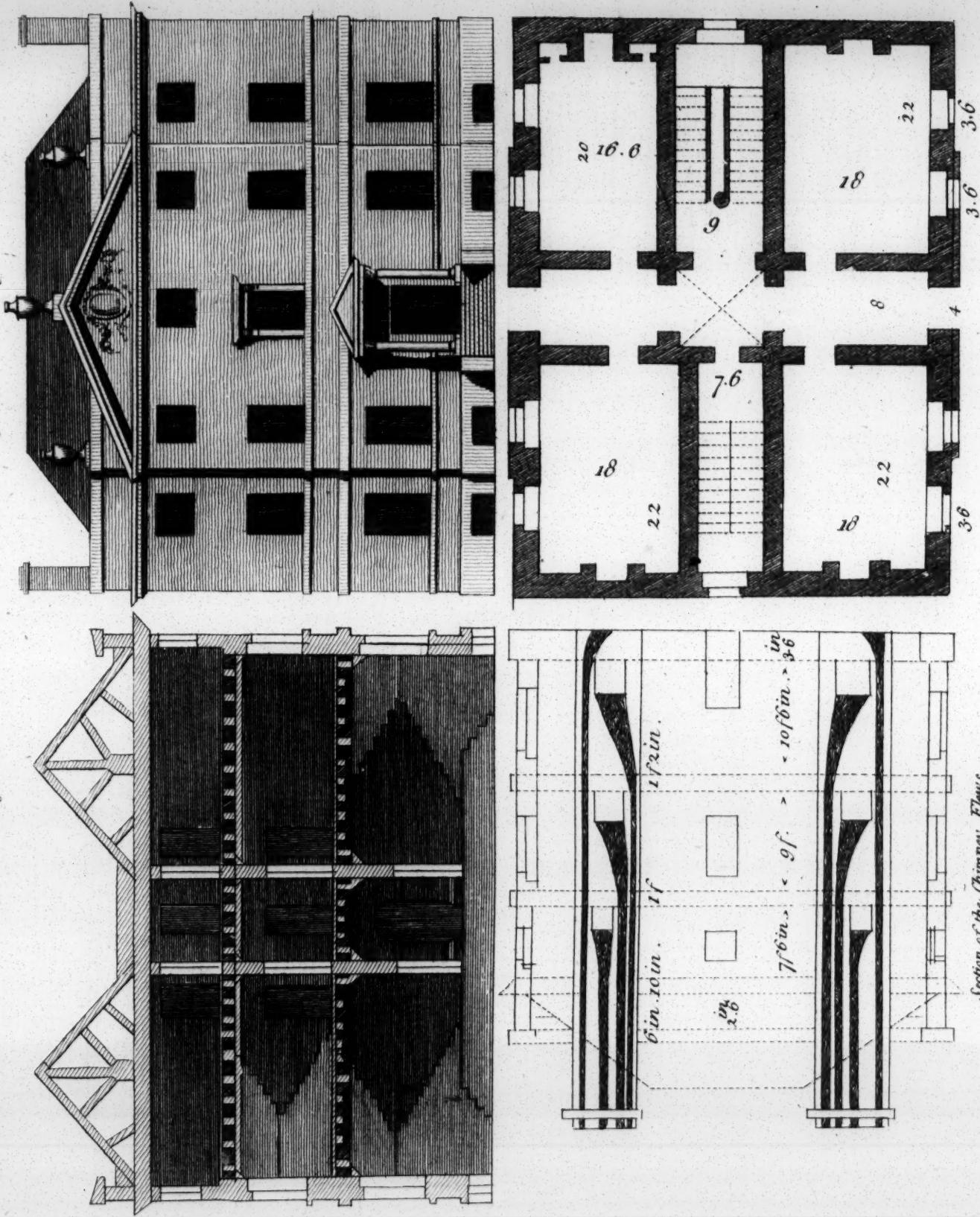
Plan & Elevation of a Circular & Oval Stair Case. Plate LXXIV.



*To be lighted by a Dome or Cone Lanthorn at the top, if placed in the middle of a Building. If on the outside may be lighted by Windows in the Wall at each landing.
To make the Hand-rail make a Templet or Cylinder to the well hole or open of the Rail, draw the tread & rise of each Step on the Cylinder, and that will give the falling of the Rail which is to be glewed in thickness bent round the Cylinder, then the Rail will come off ready squared, this is a very sure way to make the Rail.*

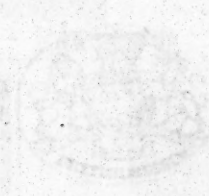
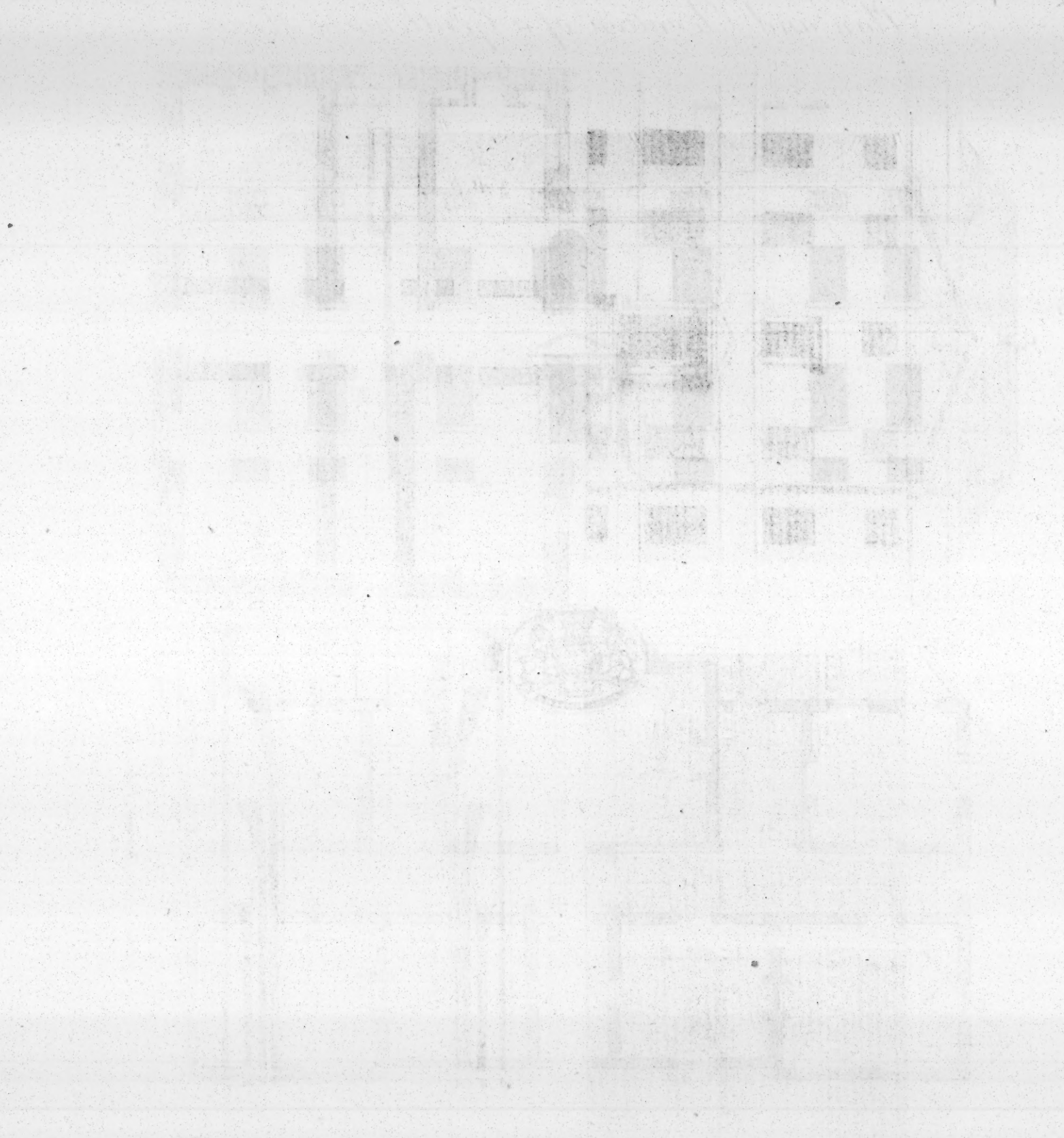


Plan, Elevation & Section of a Gentleman's House, the Offices being in the Basement Story.

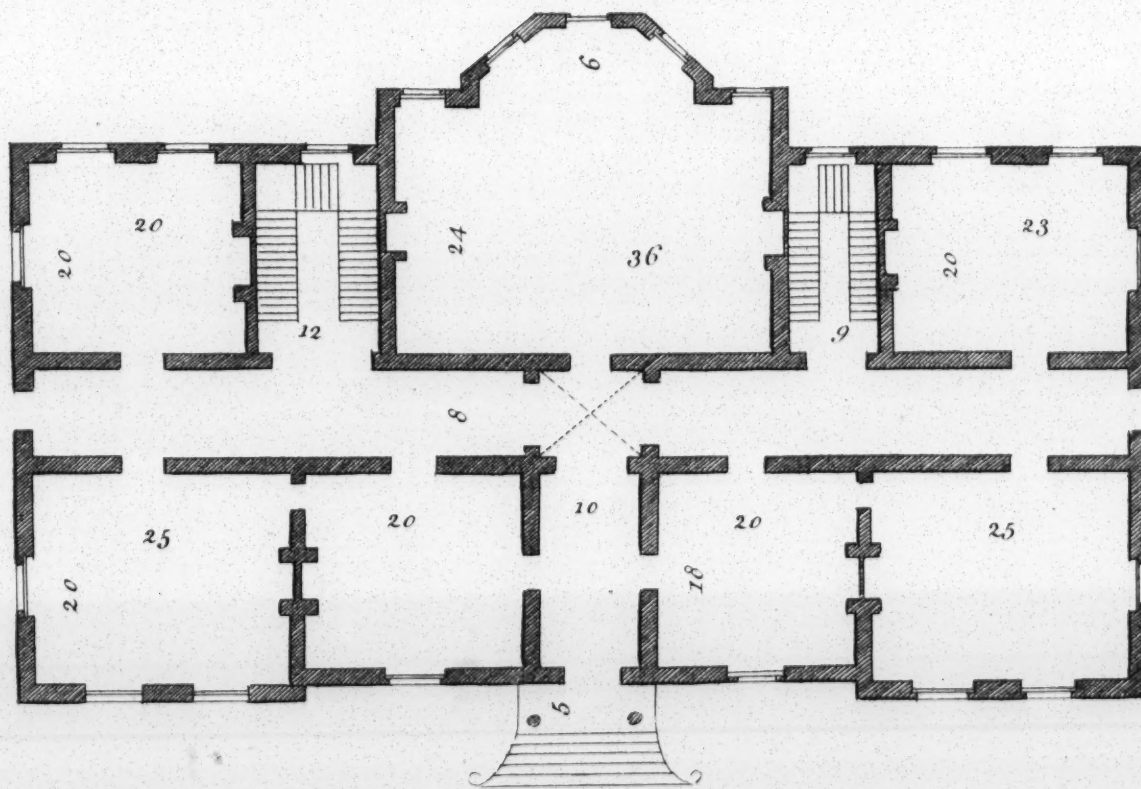
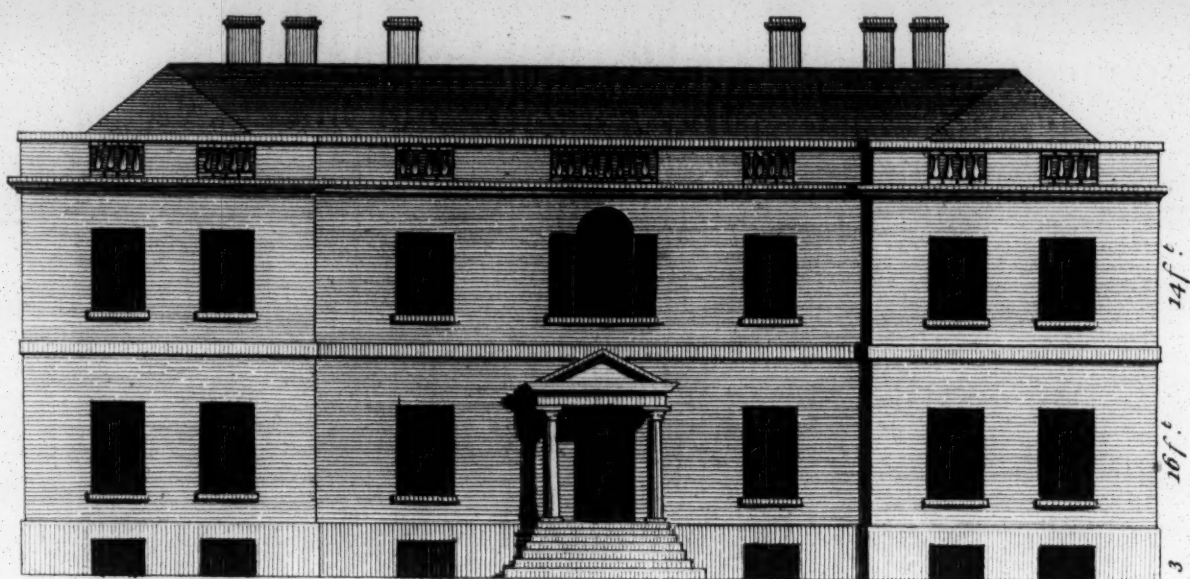


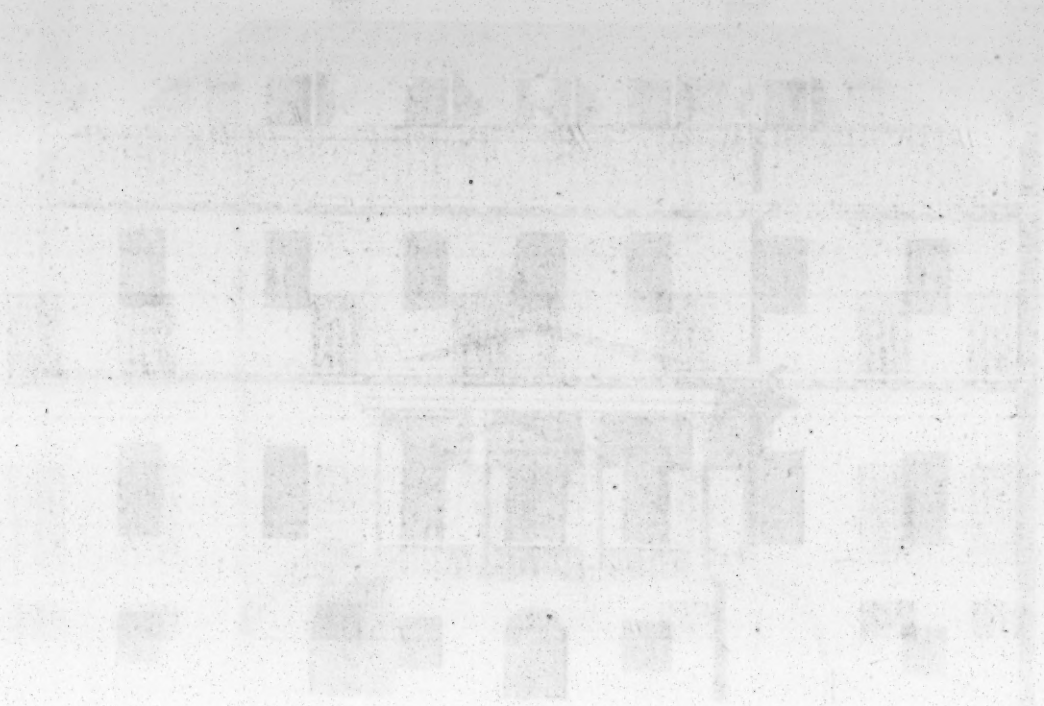
Section of the Chimney Flows.

1871

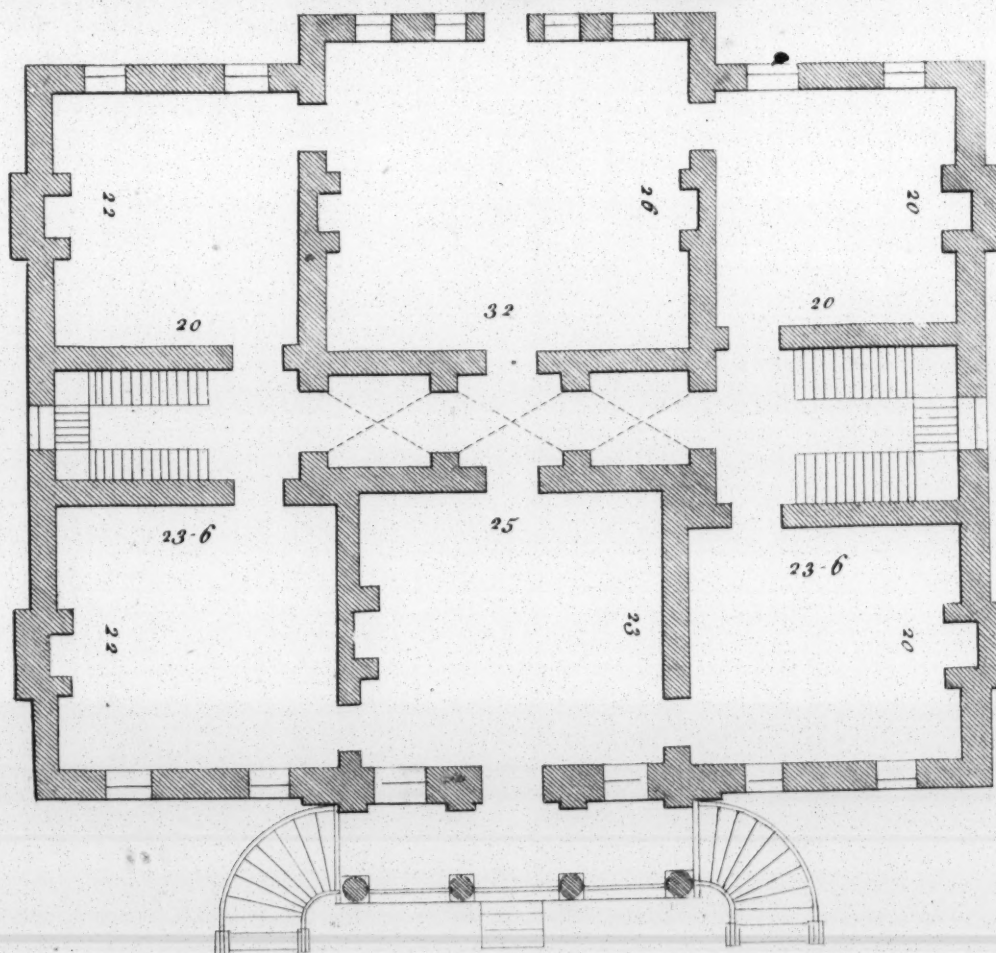
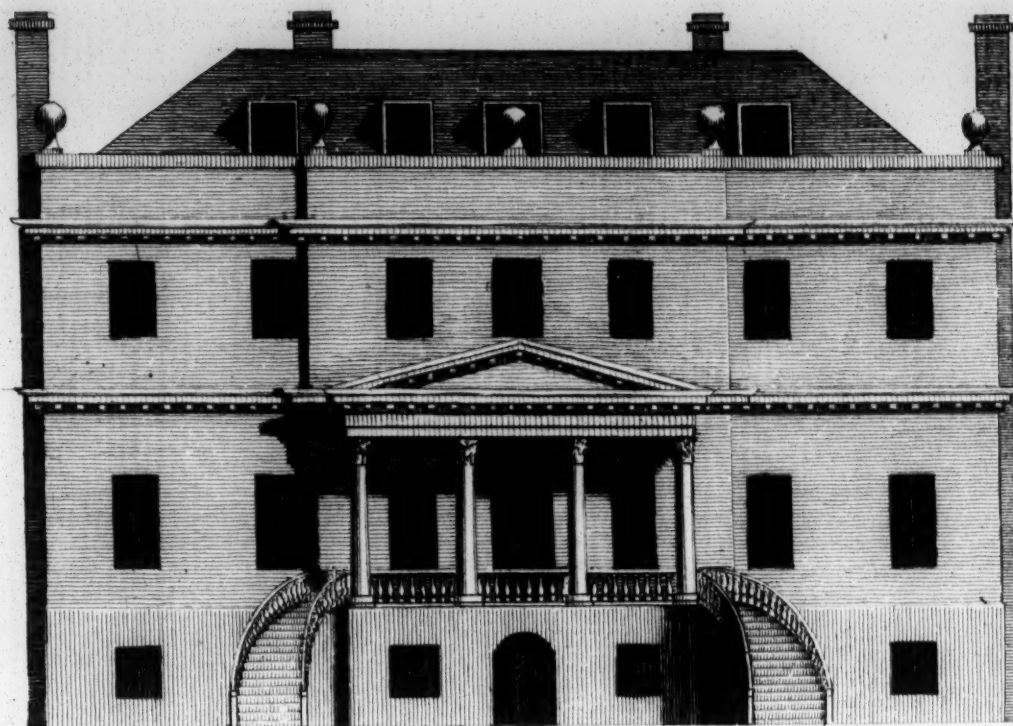


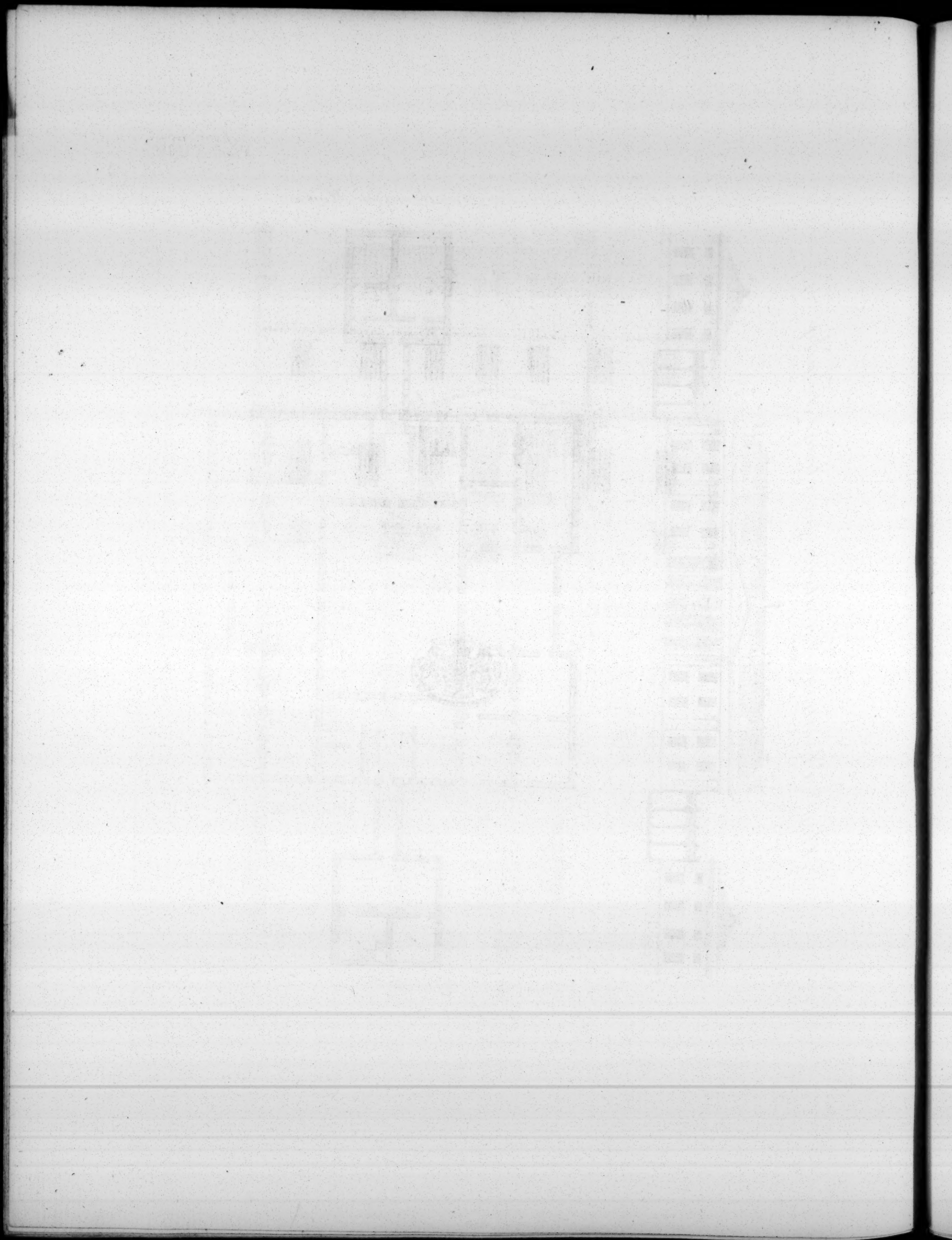
Plan and Elevation of a Gentleman's House.



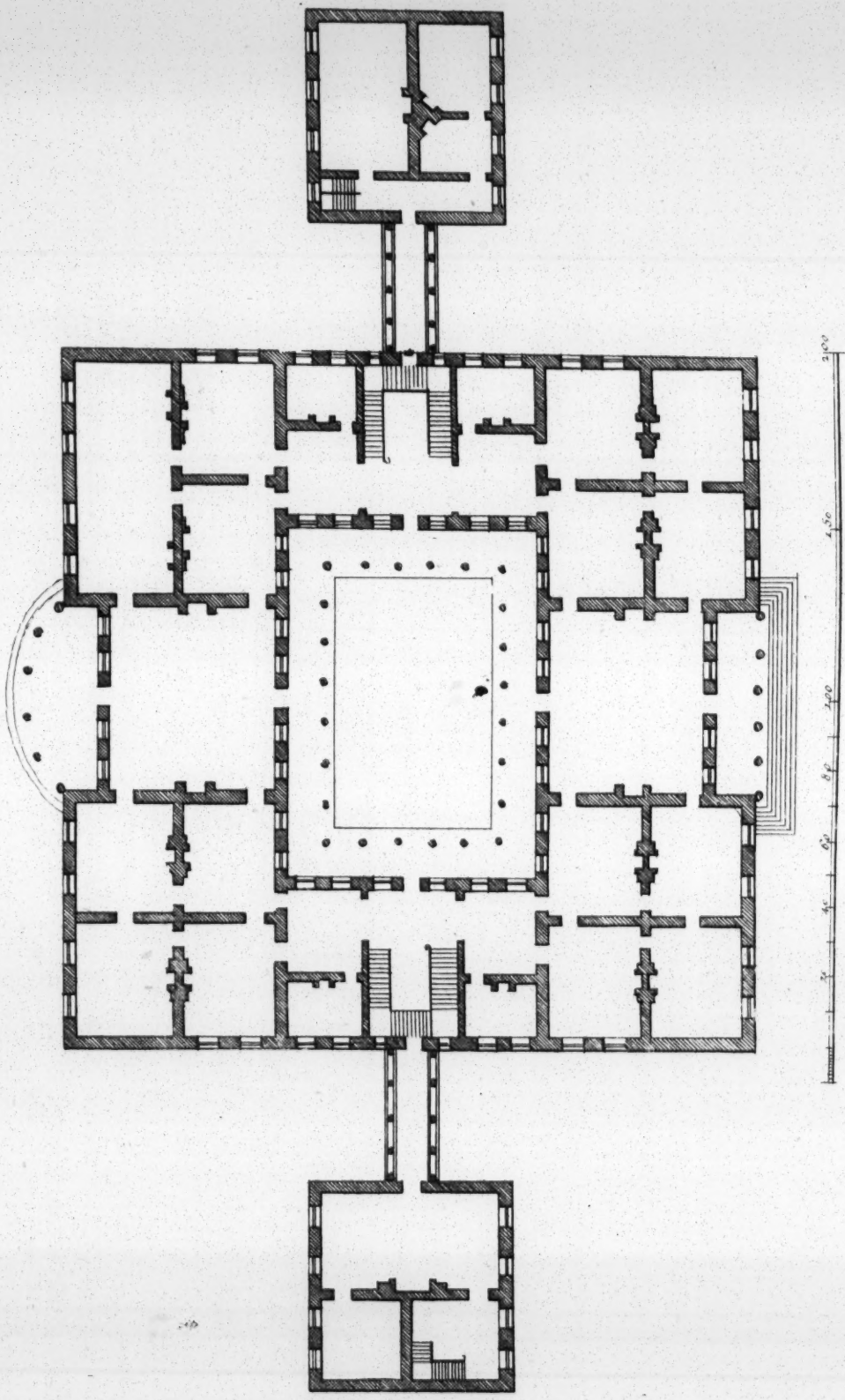
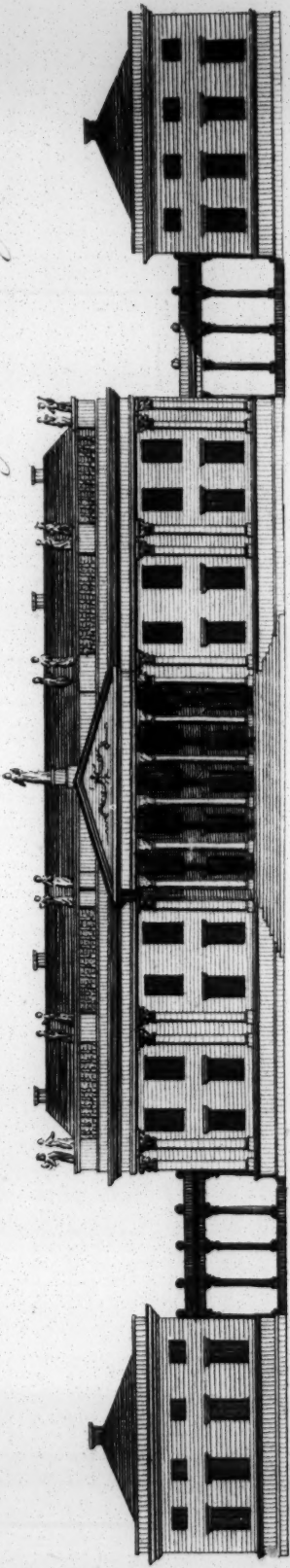


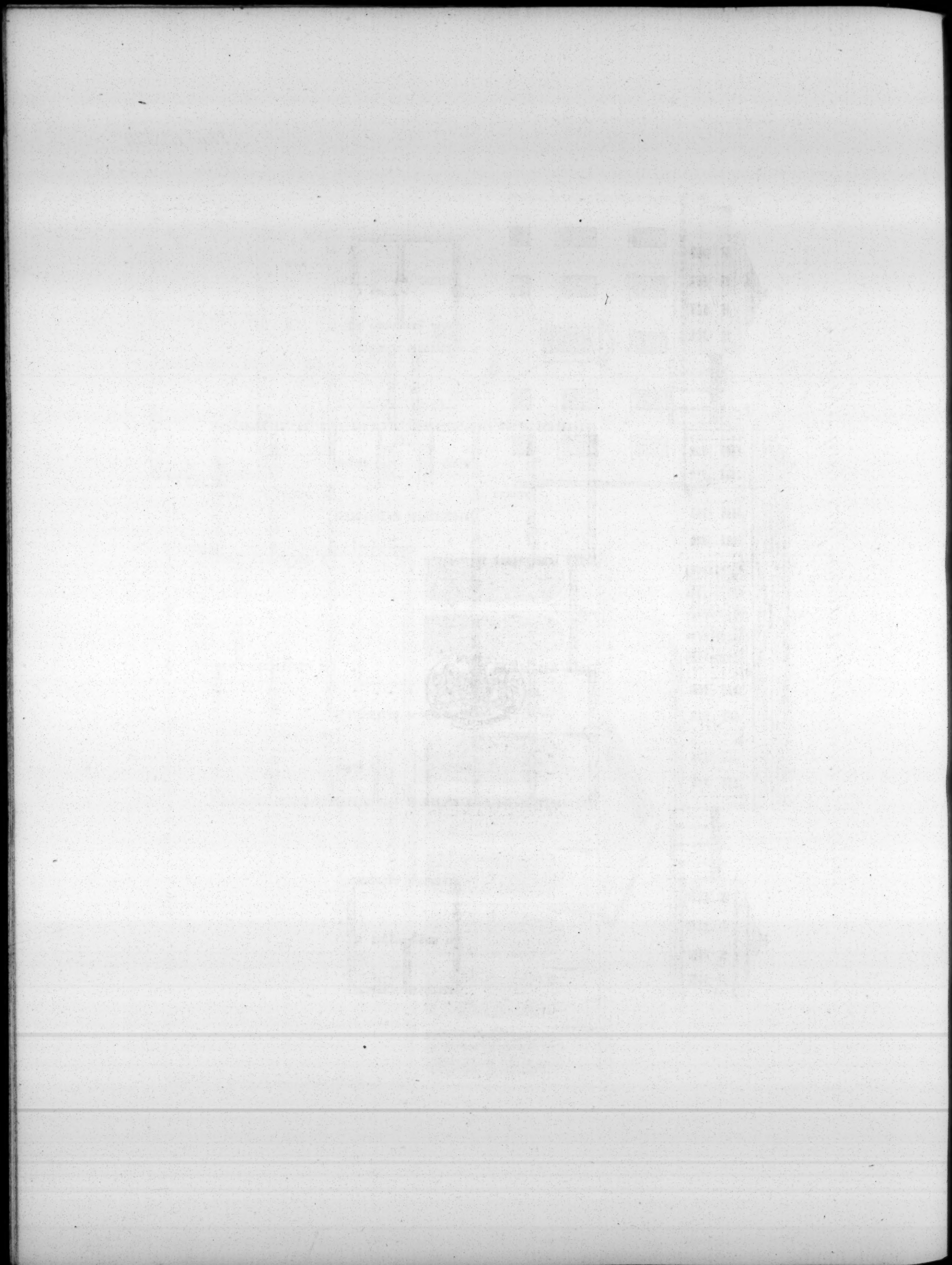
Plan & Elevation of a Gentlemen's House.

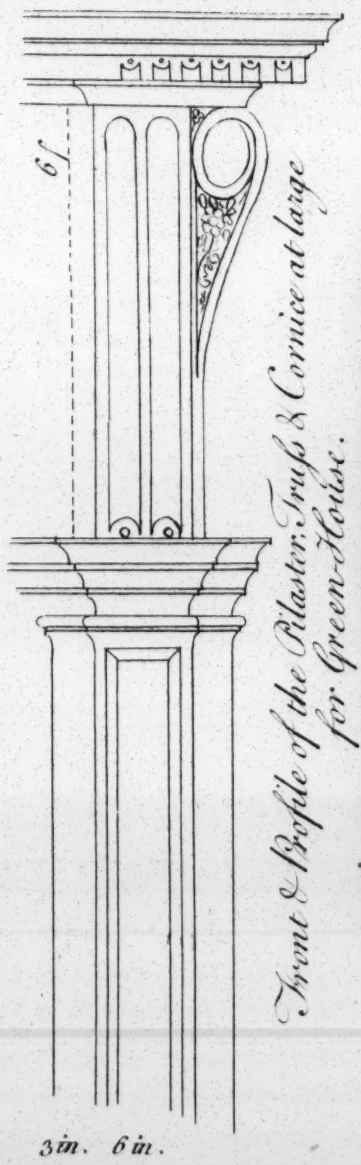




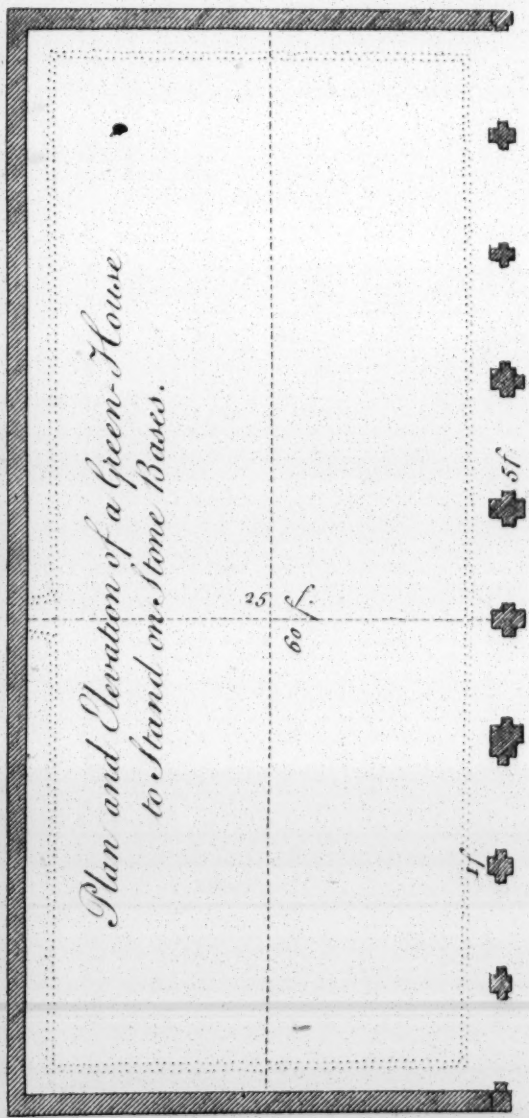
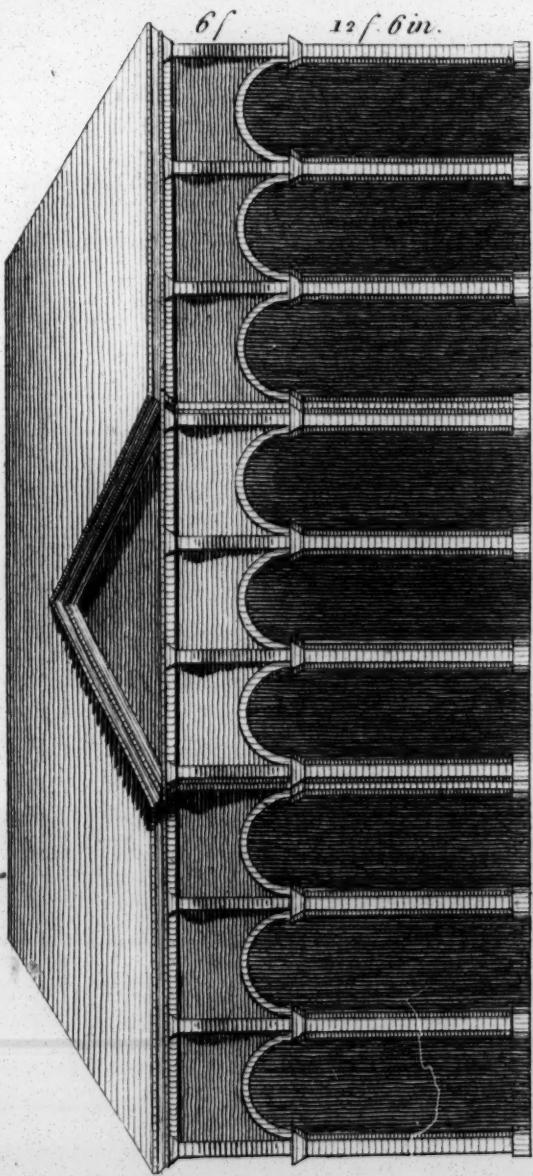
Plan & Elevation of a House for a large Family.





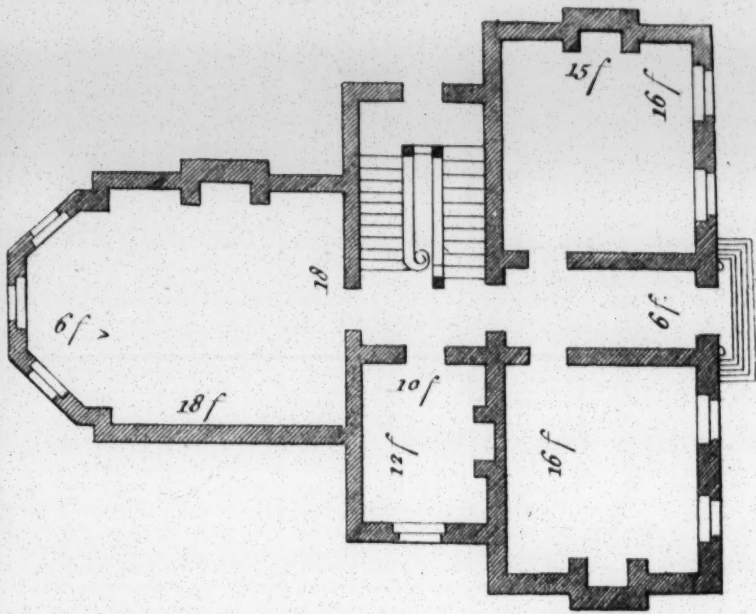
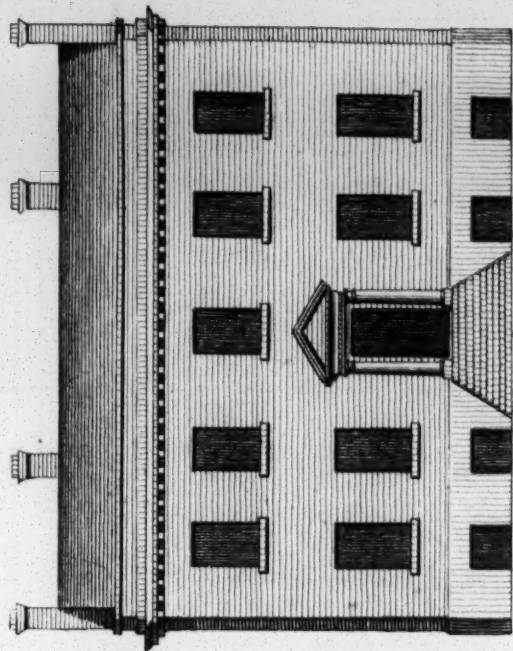


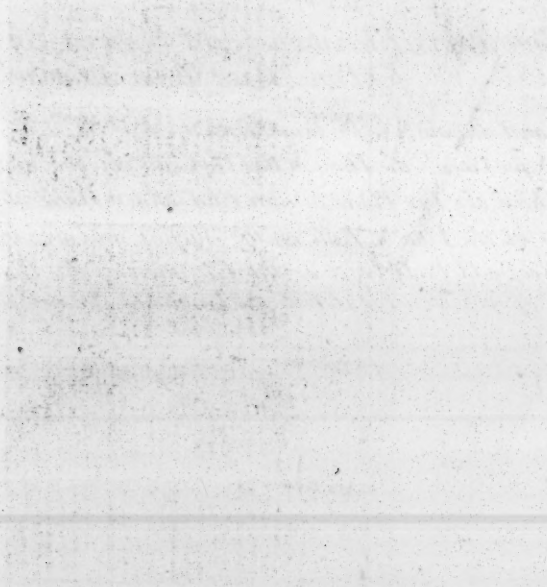
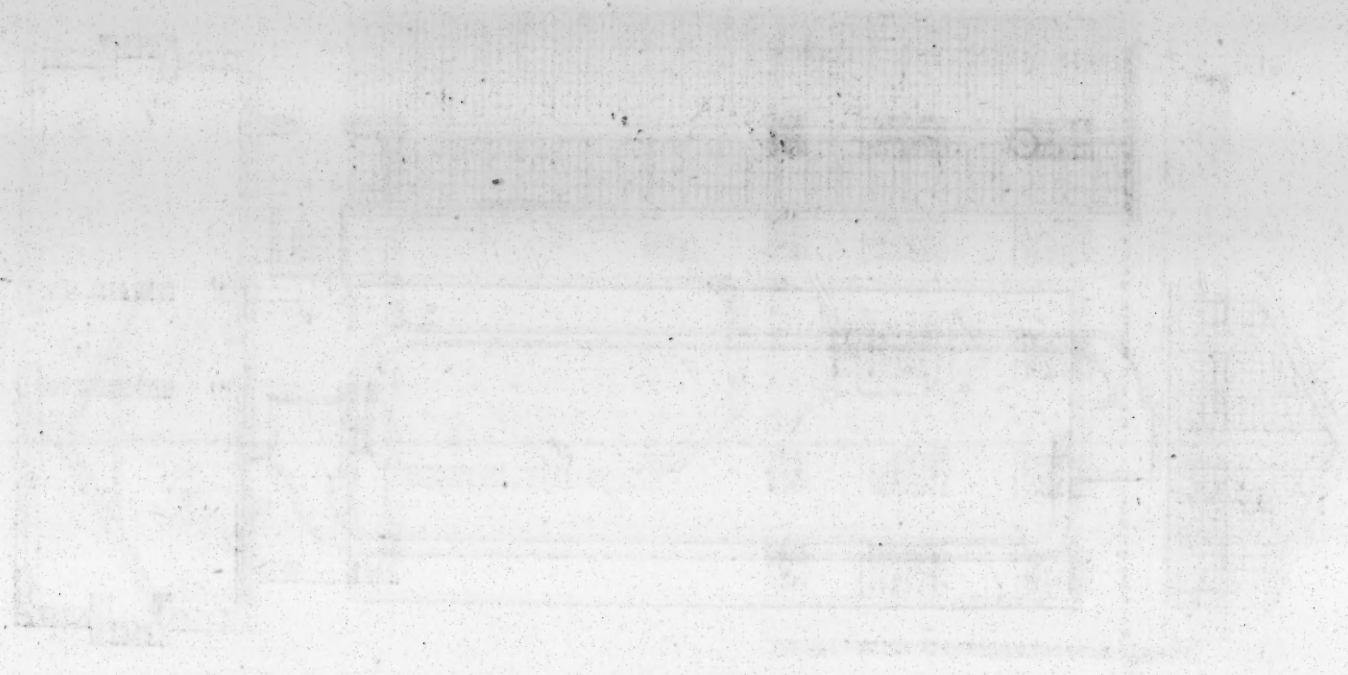
*Front & Profile of the Bilaster Truss & Cornice at large
for Green-House.*

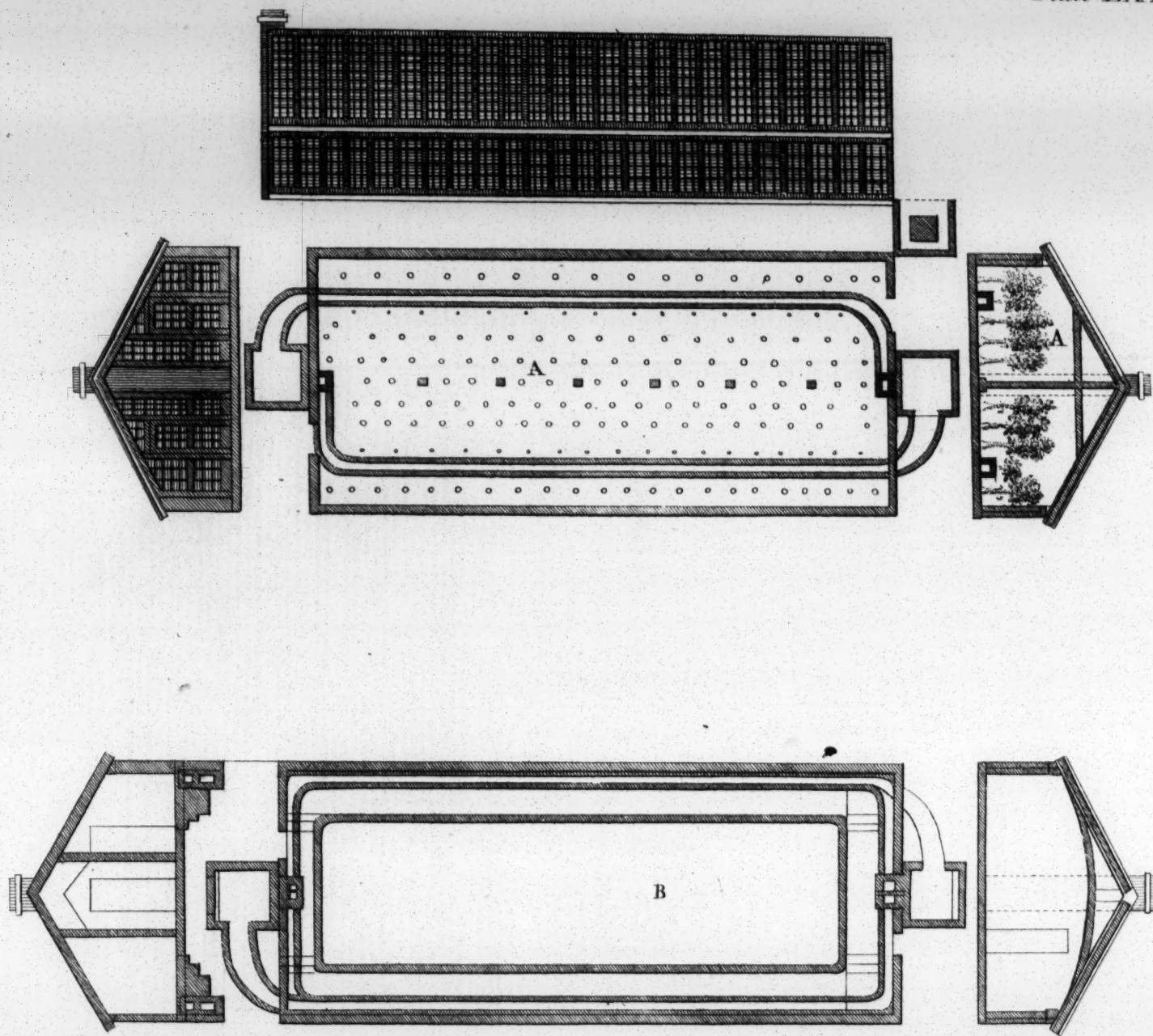


*Plan and Elevation of a Green-House
to stand on stone Bases.*

*Plan and Elevation for
a Dwelling-House.*







*Two Plans, Elevations and Sections for Stoves or Hot Houses
for Pines, Fruit Trees, Strawberry's &c.*

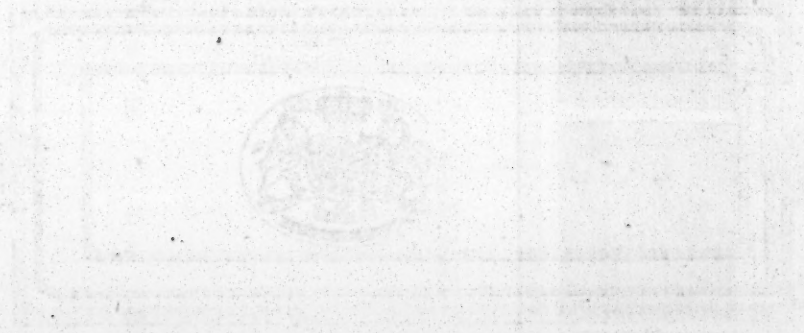
The Plan and Section A is for Fruit Trees.

The Plan B, for Pines; the Flues in this Plan run one over another as may be seen in the Section, There are Fire Places at each End and a Walk all round.

The Flues in the Plan A, Run on the Surface and are single Flues.

The Front Roof and Ends Glaz'd, as the Elevation of the Plan A.

The Width of each House is 16 Feet the Length at Pleasure from 40 to 50 Feet. or more at pleasure.

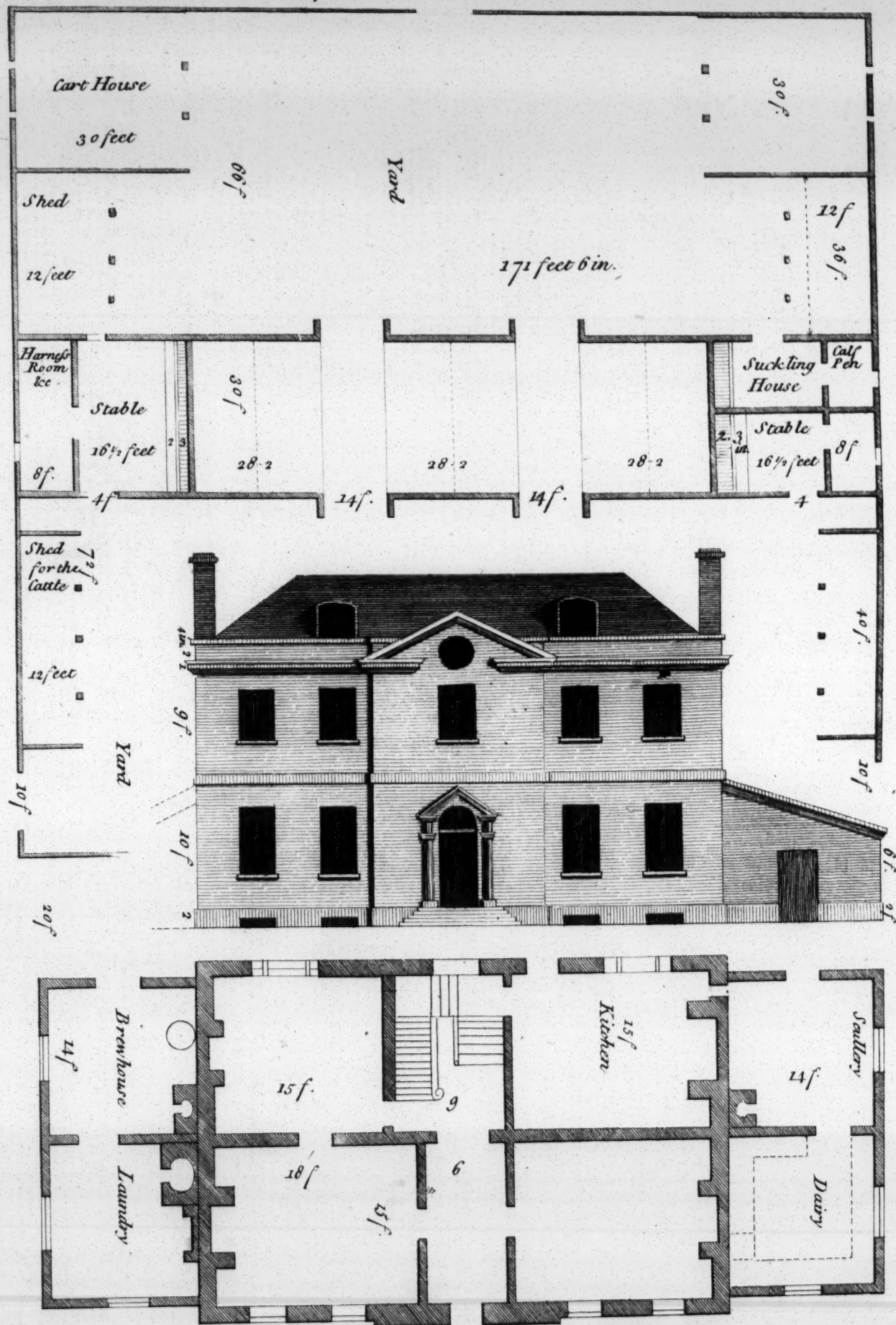


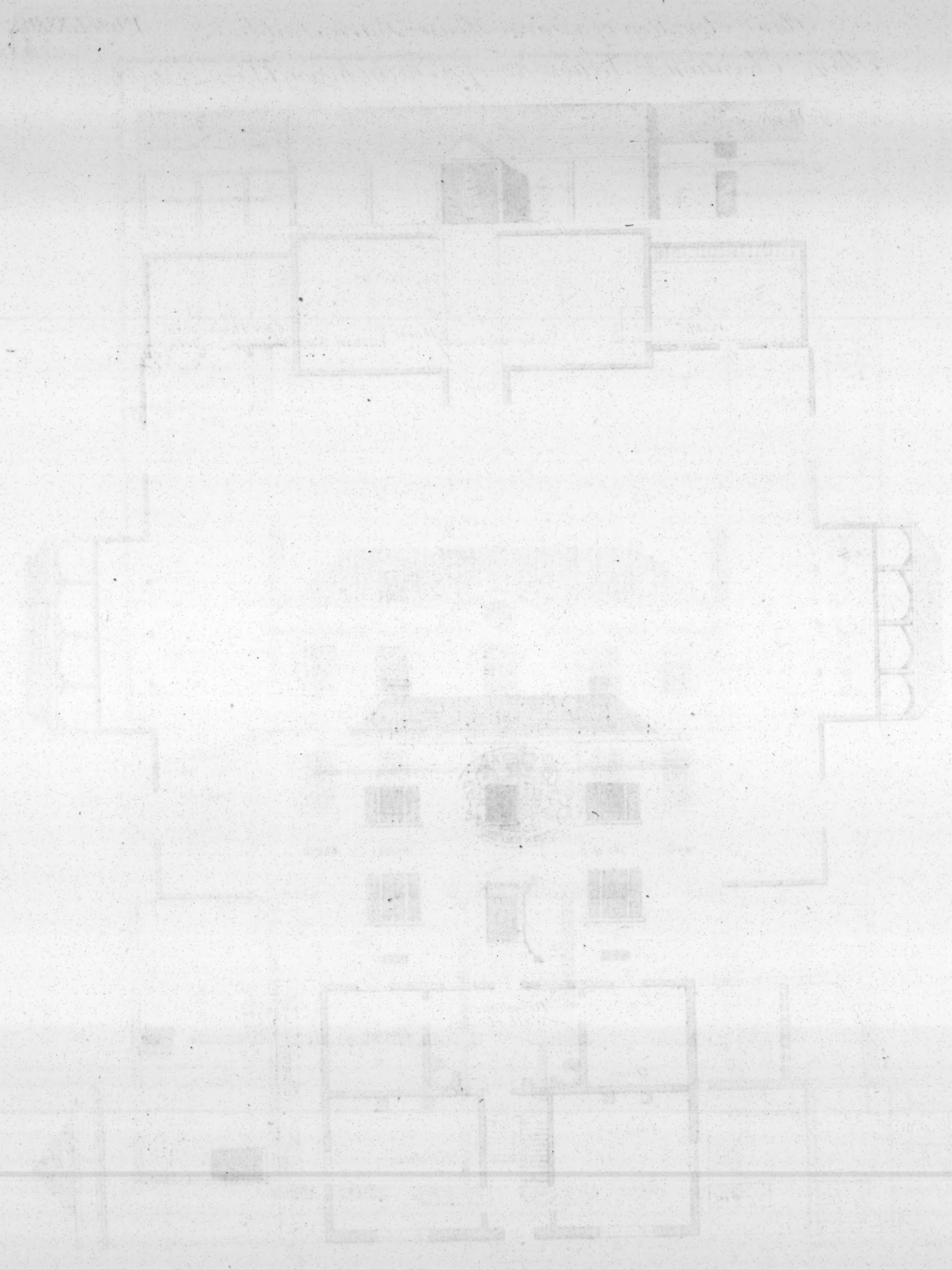
Faint, illegible text or markings located below the central stamp.

Faint, illegible text or markings located at the bottom of the page.

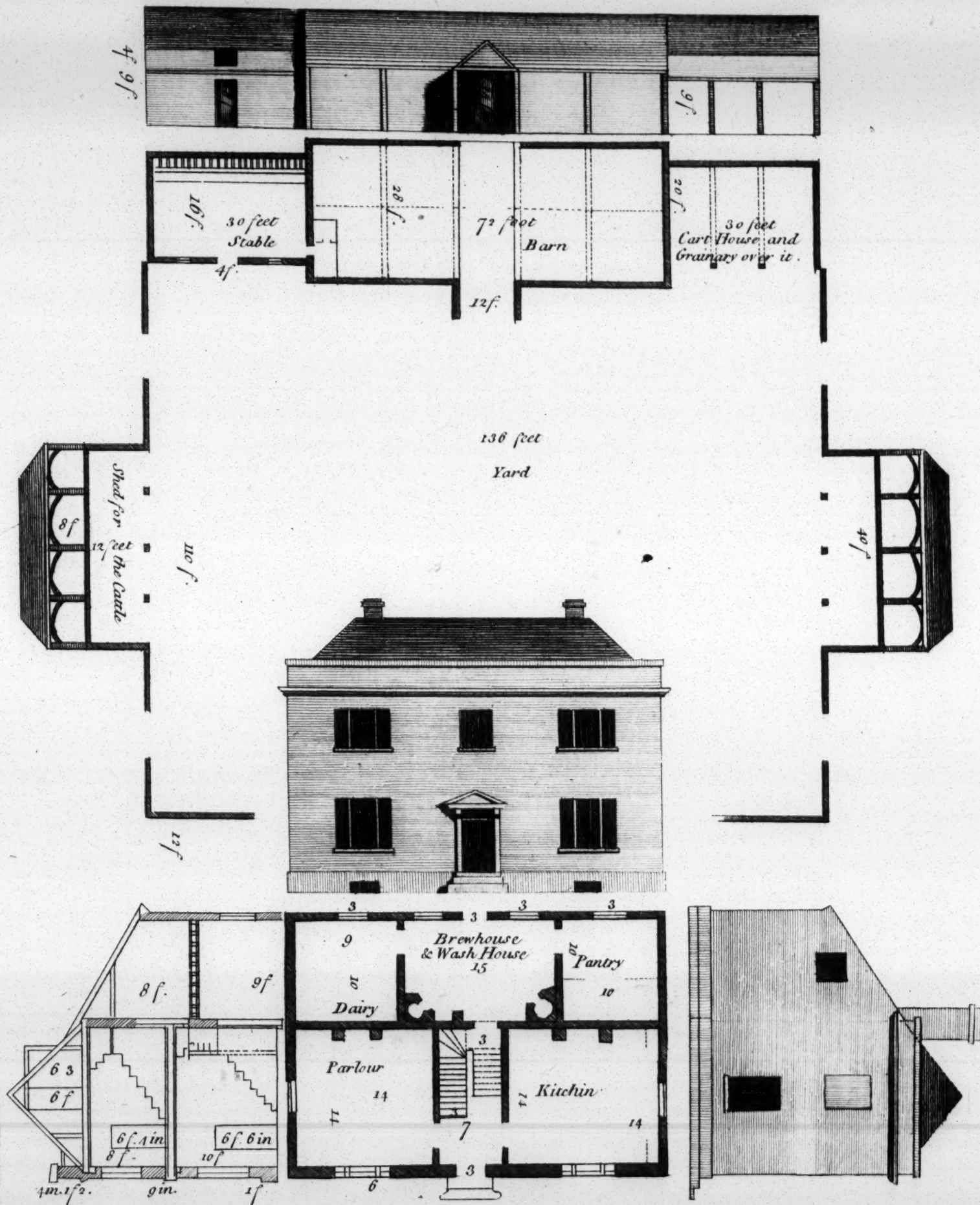


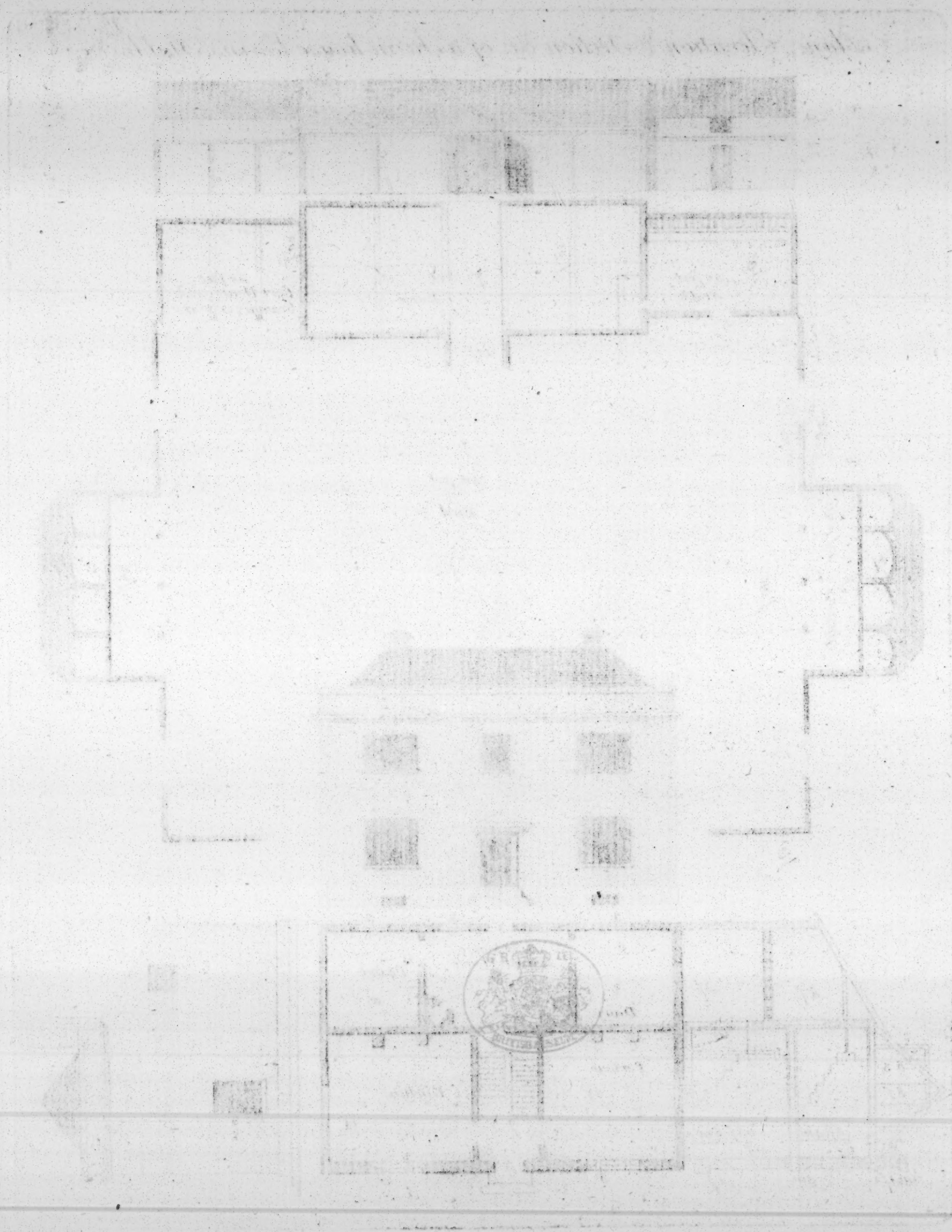
Plate LXXXII.





Plan, Elevation & Section &c. of a Farm-house Barns, Stables &c. Plate LXXXIII.





BOOKS printed for and sold by I. TAYLOR.

1 **T**HE Carpenter's Treasure; a Collection of Designs for Temples, with their Plans, Gates, Doors, Rails, and Bridges, in the Gothic Taste; with the Centres at large, for striking Gothic Curves and Mouldings; and some Specimens of Rails, in the Chinese Taste: Forming a complete System for rural Decorations. Neatly engraved on sixteen Plates, from the original Drawings of N. WALLIS, Architect 2s. 6d.

2. A Book of Ornaments in the 'Palmyrene Taste, containing upwards of sixty new Designs for Ceilings, Pannels, Pateras, and Mouldings: with the Raffle Leaves at large: By N. WALLIS, Architect, elegantly engraved on 12 Plates. 4s. 6d. sewed.

3. The Compleat Modern Joiner, or a Collection of original Designs in the present Taste, for Chimney-Pieces and Door-Cases, with their Mouldings and Enrichments at large; Frizes, Tablets, Ornaments for Pilasters, Bases, Sub-bases and Cornices for Rooms, &c. with a Table shewing the Proportion of Chimnies, with their Entablatures, to Rooms of any Size. By N. WALLIS, Architect. 8s. sewed, bound 10s.

Note, Both the above Books few'd in one, 12s. or 14s. bound.

4. A new Book of Ornaments, designed by T. LAW S, Carver. 2s. sewed.

5. A new Book of Foliage, on ten Plates, for the Use of Learners, &c. By H. Gerrard. 2s. 6d.

6. The Gentleman and Tradesman's Compleat Assistant, or the whole Art of Measuring and Estimating made Easy; containing the Names and Prices of all Artificers Work in general, relating to Building, viz. Bricklayers, Carpenters, Joiners, Carvers, Plaisterers, Painters, Paviments, Smiths, &c. 3s. 6d. sewed, 4s. 6d. bound.

7. LANGLEY's Builder's Chest-Book, or Key to the Five Orders of Architecture. Second Edition, much improv'd. 3s. bound.

8. Fourteen Vases from the Antique. 2s. sewed.

9. The Builder's Jewel. By B. LANGLEY. 4s. 6d. bound.

10. The Builder's Director, or Bench-Mate; on 184 Plates. 4s. bound.

11. HOPPUS's Practical Measurer, greatly enlarged and improved, 2s. 6d. bound.

12. The Modern Gardener, or Universal Kalendar; containing monthly Directions for all the Operations of Gardening; to be done either in the Kitchen, Fruit, Flower, or Pleasure Gardens: Illustrated with 13 Plates, neatly engraved, of entire new Plans for Stoves, Green-houses, &c. By JAMES MEADER, late Gardener to the EARL of CHESTERFIELD. 4s. sewed, 5s. bd.

13. The Stove-Grate Maker's Assistant, or a Treasury of Original and Fashionable Designs, for Bath-Stoves, Pennsylvania-Stoves, single and double Standard Grates, Frets, &c. By W. GLOSSOP, Stove-Grate Maker. Elegantly engraved on 24 Plates. 5s. sewed.

14. The Plan and Elevation (on two large Sheets) of that grand Structure *Mafra*, near *Lisbon*, the Palace of the King of Portugal, Price 6s.

15. A large Print of *Shoreditch-Church*. 3s.

16. A Print of *Greenwich Church*, 1s.

17. Health, an Essay on its Nature, Value, Uncertainty, Preservation and best Improvement. By B. GROSVENOR, D. D. 2s. 6d. bound.

18. *Le Beau's* Compendious French Teacher; to which are added, thirty-eight Letters of Commerce, in French, as Models to those who would chuse to form themselves to the useful Style of Epistolatory Correspondence. 2s. bound.



